



Making  
**optimal**  
performance  
possible

Annual Report 2015

Haldor Topsoe is a world leader in catalysis and surface science. We are committed to helping our customers achieve optimal performance.

We enable our customers to get the most out of their processes and products, using the least possible energy and resources, in the most responsible way.

This focus on our customers' performance, backed by our reputation for reliability, makes sure we add the most value to our customers and the world.

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# Letter from the **Chairman**

The past year has been challenging for Haldor Topsoe A/S. Geopolitical and macroeconomic circumstances have not been favorable for us and this is reflected in the annual results. Throughout 2015, the Board of Directors has worked with the Executive Management team on how to address the challenges timely and efficiently and this resulted in the introduction of a revised strategy, which we feel can better deal with the global changes. In order to restore the necessary balance between costs and revenue we have also during the year introduced significant cost savings, and unfortunately lay-offs were also deemed necessary in August.

In spite of the challenges mentioned above we have already seen positive effects of the new strategy and the cost savings, resulting in an acceptable financial result in 2015.

The Board is convinced that the revised strategy shows the right path ahead for Topsoe. The growth of Topsoe will continue to be based on the company's unique scientific and technological insight, which provides our customers with unique opportunities to optimize their business. The company is well positioned for growth, because Topsoe provides solutions to fundamental global challenges such as food supply, energy conservation and emissions control, preventing harmful substances from reaching the environment. We continue to be market leaders in many of our business areas, and we continue to invest heavily in R&D, which will form the future of our company.

During 2015 the Board established an Innovation Committee to further strengthen the focus on Topsoe's research and long term development.

We expect the Committee will assist in securing a continued strong innovation pipeline of products and services that are closely linked to customer needs now and in the future.

Haldor Topsoe celebrated its 75 year anniversary in 2015 – a milestone that was marked across the global organization. Also, our subsidiary in Houston, USA, turned 50 years old.

On behalf of the Topsøe family and the Board of Directors, I would like to thank each and every employee and all our business partners for their valuable contribution in 2015.

**Henrik Topsøe**

Chairman of the Board of Directors



*"We have seen positive effects of the new strategy and the cost savings, resulting in an acceptable financial result."*

# Letter from the CEO

Revenue reached DKK 5,785 million in 2015, which was 2% more than in 2014 and the highest ever. Revenue was positively influenced by currency fluctuations, and adjusted for this effect, revenue in 2015 was 4% lower than the year before. EBIT in 2015 was DKK 502 million against DKK 563 million in 2014, a reduction of 11%. The negative market conditions affected our entire industry, but Topsoe maintained its market shares in 2015. During the year, a number of initiatives were implemented in order to reduce our cost base, the effect of which we saw already in the second half of 2015.

Our business in 2015 was negatively impacted by global unrest and dwindling macroeconomic development in several of our most important markets, including Russia, Brazil, and China. The sanctions against Iran also continued to limit our growth. In addition, our profitability was adversely impacted by increasing staff expenses and start-up costs from new production sites.

During the past year, we implemented several initiatives to build the platform for future growth. It was a hard, but inevitable decision to lay off approximately 160 good colleagues in August 2015. We also implemented a comprehensive cost awareness program that led to significant cost reductions.

Overall, the 2015 results did not meet our growth ambitions. However, financial results improved in the second half of 2015 compared to the first six months as a consequence of the initiatives taken and an improvement in technology revenue.

As a response to the difficult market situation, we adjusted our strategy in 2015 but maintained our ambition of profitable growth.

## Adapting to customer needs

In 2015, we adapted our offerings to optimally support our customers by introducing a number of new and improved products. Our technology sales followed the market's increased need for revamps and optimization of existing plants. This led to an encouraging pick-up in technology sales in the second half of 2015.

We also introduced new sales concepts and business models, which put us in a good position to act fast when demand picks up again. To be able to respond even faster to new customer needs, we reorganized our global organization in 2015 and reduced the Executive Management team to six members in the beginning of 2016.

## Partnering and acquisitions

Topsoe's growth strategy combines organic growth of existing businesses, introduction of new business areas, new business models, and partnering and acquisitions.

In April 2015, Topsoe entered into a partnership with US-based Unifrax. The resulting TopFrax™ filters are applicable in many industries and we expect to see significant demand.

In May 2015, Topsoe entered into a joint venture with the German company Ferrostaal to establish Ferrostaal Topsoe Projects GmbH. By combining the outstanding project development skills of Ferrostaal with Topsoe's world-class technical expertise, we can offer customers unmatched integrated solutions. This has already resulted in a number of interesting leads.

In August 2015, Topsoe acquired the Furnace Manager Technology. This technology complements our existing offer-

ings very well and has spurred significant customer interest.

## The coming year

2016 can prove to be a challenging year as geopolitical and macroeconomic uncertainty will presumably continue to negatively affect many of our important markets. However, due to the strategic initiatives and actions taken in the past year Topsoe is well-prepared to meet the challenges. Topsoe expects 2016 revenue to be in line with or slightly above 2015 revenue and that 2016 profitability (EBIT margin) will increase compared to 2015.

The lifting of the sanctions against Iran is expected to have a positive influence on Topsoe's results in 2016, because several halted projects will be re-started.

I want to thank everybody who has been part of Topsoe's journey in 2015. The support and confidence from our customers and partners have been outstanding and I look forward to continuing our collaboration in 2016. Also a very special thank you to our employees for their continued determination to make a difference, also when the going gets tough. I am confident that we will deliver on our strategic goals and become an even more valuable partner to our customers in the coming year.

## Bjerne S. Clausen

President & Chief Executive Officer



*“Topsoe enters 2016 fit to meet the challenges due to the strategic initiatives and actions taken in the past year.”*

# Haldor Topsoe in brief

We are committed to helping our customers achieve optimal performance. We do that by constantly asking ourselves: As a market leader in catalysis and surface science, how can we contribute to a more prosperous and sustainable future for both our customers and their communities?

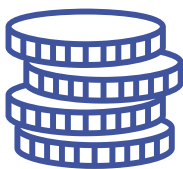
## What is catalysis?

- A catalytic process converts one chemical component into another. For instance, hydrogen and nitrogen can be catalyzed into ammonia.
- Using a catalyst to produce a chemical process speeds up the reaction and consumes much less energy. Production yield increases, and resources are saved.
- 60% of all industrial products are made using catalysts.

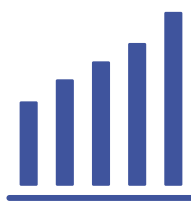
After more than 75 years of providing the most advanced, reliable and economically advantageous solutions available, the answer remains the same: make optimal performance possible.

We enable our customers to get the most out of their processes and products, using the least possible energy

and resources, in the most responsible way. This focus on our customers' performance, backed by our reputation for reliability, makes sure we add the most value to our customers' businesses and the world.



REVENUE  
**5,785**  
million DKK



EBIT  
**502**  
million DKK



R&D INVESTMENT  
**10%**  
OF REVENUE



## History



**MARKET LEADER**  
IN HETEROGENEOUS  
CATALYSIS & SURFACE  
SCIENCE



**ESTABLISHED**  
**1940**  
BY DR. HALDOR TOPSØE



**100%**  
**FAMILY OWNED**  
BUSINESS

## Company



**10**  
**COUNTRIES**  
4 CONTINENTS



**2,688**  
**EMPLOYEES**  
63 NATIONALITIES



**OVER**  
**1000**  
TOPSOE DESIGNED UNITS



**GENDER SPLIT**  
**71%** **29%**  
MALE FEMALE



**MORE THAN**  
**150**  
DIFFERENT CATALYSTS



**MAKING A DIFFERENCE**  
**24/7**  
AROUND THE CLOCK

# What we do

Driven by our passion for science, we contribute to a profitable and sustainable future for our customers, their businesses, and their communities. Our solutions enable our customers to get the most out of their processes and products, using the least possible energy and resources, in the most responsible way.



## SECURE FOOD SUPPLY

Chemical processing – helps the petrochemical industry produce ammonia for fertilizer



## CLEANER AIR

Emissions management – helps customers comply with environmental regulations



## CLEANER FUELS

Hydroprocessing – helps refineries produce high-grade products

# What we offer

Topsoe offers world-leading services and products that make optimal performance possible for our customers – individually or in uniquely integrated solutions, where each element is designed for ideal interaction.



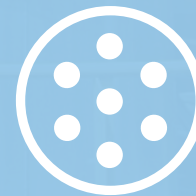
## PROCESS DESIGN & ENGINEERING

A broad range of highly effective processes within chemical processing, hydroprocessing and emissions management



## COMPLETE RANGE OF EQUIPMENT

Proprietary equipment, spare parts and consumables designed to work optimally together



## CATALYSTS

More than 150 different catalysts and the ability to design and manufacture custom catalysts for specific tasks



## BUSINESS & TECHNOLOGY SERVICES

Engineering, technical, business and training services that support customers all the way from planning a new plant to optimizing production



## PRODUCTS OF TOMORROW

From battery materials to bio-diesel, we develop catalytic processes that allow customers to make products that make a difference

# Topsoe around the globe

Customers all over the world are serviced by the regional offices. Topsoe's global organization also encompasses production plants and engineering activities.



Headquarters



Production plants



Regional offices



Engineering

## Americas

### North America



North America is Topsoe's largest market and we supply a large variety of catalysts and technology to the refining, chemical and petrochemical industries. The shale gas boom has spurred interest in Topsoe products that convert shale gas into high-value products, and technologies to control emissions levels and produce cleaner fuels are also in high demand.

In 2015, Topsoe delivered licensed process technology, basic engineering, catalysts and services for the first new methanol plant in the US in many years – Fairway Methanol LLC's new facility. We also celebrated 50 years in the US, where we now employ more than 250 people at our production plant and main office in Houston and our Los Angeles office.

### Latin America



Our new production facility in Joinville, Brazil, will produce catalysts for heavy duty diesel engines on the Brazilian market when it opens in the first half of 2016. Topsoe technologies have been chosen for revamps of a number of Mexican refineries and are also applied in several Latin American refineries, including the newest one under construction in Brazil. Our technology is also used in several ammonia plants, including the continent's largest in central Argentina.

Topsoe's engagement in Latin America is growing. 25 employees are employed at our regional offices in Buenos Aires, Argentina, and Rio de Janeiro, Brazil, which were established in 2008 and 2012, respectively.

## EMEA

### Denmark



Denmark is home to Topsoe's headquarters, where over 1,200 employees work in research & development, engineering, production, global sales, and support functions. Many employees engage directly with customers around the globe, while others support our global organization in the regional markets.

Topsoe's largest production facility is also located in Denmark. More than 700 highly skilled operators and other employees manufacture a large variety of products under very high quality demands. The plant ships products to customers in all parts of the world.

### Russia



Russia and neighboring countries need technology that can capitalize their rich oil and gas resources in an efficient way. This has led to a strong position for Topsoe's offerings, not least within new and existing ammonia plants. Our catalyst business has also grown significantly, and solutions for emissions management generate much interest.

Topsoe services and products are supported by a dedicated local presence. Our Moscow office is the base for 65 employees who service Russia, Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Turkmenistan, Ukraine and Uzbekistan. Topsoe has enjoyed close collaboration with the Russian industrial and scientific community for decades.



## APAC

### Middle East



Customers in the expanding local petrochemical and refining industry demand Topsoe technologies and services that support their core processes within ammonia and hydrogen production, Gas-to-Liquids (GTL), and hydrotreating. Our hydroprocessing and environmental solutions meet increasing demand, as fuel specifications and environmental regulations become more stringent. To this end, Topsoe offers customers sulfur management, emissions management and technology upgrades of existing units to improve energy efficiency and production yield.

Topsoe's office in Manama, Bahrain, dates back to 2007 and employs 13 people. However, the company has done business in the Gulf region as far back as the 60s.

### India



With a market share of more than 80%, Topsoe is the largest technology supplier to Indian ammonia plants, and our catalysts are used to make over 90% of all ammonia produced in the country. In 2015, Topsoe's licensed technology was selected for a new ammonia-urea plant at Ramagundam.

Topsoe's engineering subsidiary in India covers all disciplines required to deliver a complete project engineering design package and is the largest engineering office outside Denmark. Our New Delhi facilities also house our global IT center and regional office.

Topsoe employs more than 170 people in India.

### Southeast Asia



Southeast Asia has several emerging markets and is rich in natural resources that can be monetized using Topsoe technologies. More stringent environmental regulations across the region will most likely increase demand for Topsoe's solutions to manage emissions and produce cleaner fuels. Currently, Topsoe experience increasing demand for technology and catalysts for ammonia and methanol production, our main business in Southeast Asia, and also in refinery and environmental solutions to manage emissions and produce cleaner fuels.

Topsoe's office in Kuala Lumpur, Malaysia, supports our customers in the ASEAN countries as well as Bangladesh, Australia and New Zealand. 12 people are employed here.

### China



Environmental challenges are changing demand in the Chinese market towards solutions that preserve energy and improve air quality. Topsoe solutions reduce smog, acid rain and dangerous particles from industry, power plants and heavy duty diesel vehicles and make production more energy-efficient for refineries and the petrochemical industry.

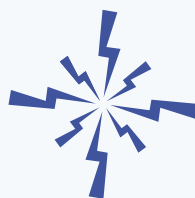
Topsoe is expanding its engagement in China with the construction of a catalyst plant in Tianjin that delivered the first batch of products in October 2015, and in January 2016, a Chinese R&D unit was established in collaboration with the renowned Dalian Institute for Chemical Physics. 160 people are employed with Topsoe in China.

# Making **optimal** performance possible

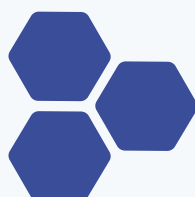
Our customers are under constant pressure to get more from less and even the smallest performance improvements are important. In Topsoe, we respond to customer challenges, using our exceptional insight into catalysis and surface science to deliver unique integrated solutions that secure optimal performance for our customers.

## Great solutions begin here

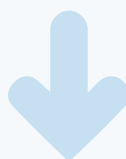
The starting point of a great solution is a deep understanding of the problem. That's why our work begins with our customers' challenges.



**CUSTOMER CHALLENGES**



**CATALYSIS & SURFACE SCIENCE**

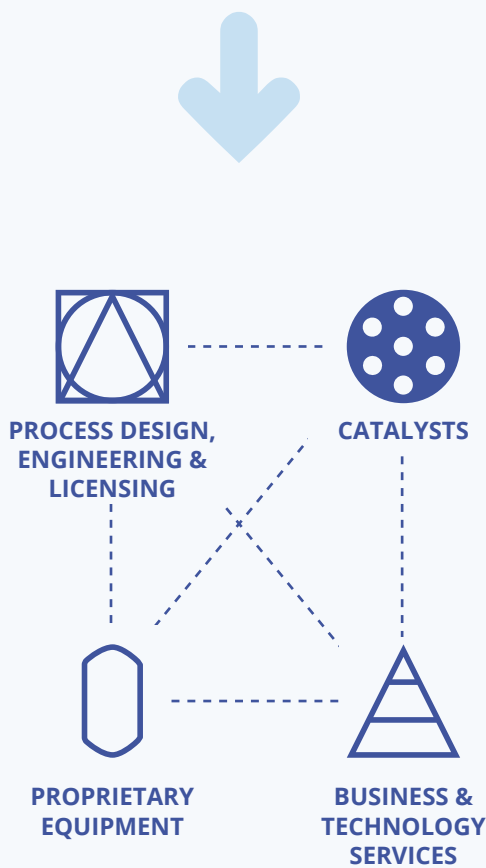


## Innovation at your service

For 75 years, we have showed the way for the development of catalysis as an industrial core process. This insight still turns challenges into solutions.

### Integrated solutions

Topsoe's world-leading catalysts, proprietary equipment, process design, engineering and services can be seamlessly integrated in uniquely advanced and reliable solutions.



### We give customers what they really need

Optimal performance - in terms of economy, quality, and environmental impact.



# Accomplishments and **results**





## Five-year summary

### Profit

<i>DKK million</i>	2015	2014	2013	2012	2011
Revenue	5,785	5,685	5,348	5,244	4,421
Gross profit	2,483	2,542	2,408	2,142	1,924
EBITDA	795	929	876	793	668
Depreciation and amortization	-293	-366	-175	-200	-201
EBIT	502	563	701	593	467
Financial income/(expenses) etc.	-40	14	-21	-28	63
Net profit	322	440	553	415	402

### Balance sheet

<i>DKK million</i>	2015	2014	2013	2012	2011
Balance sheet total	7,194	6,455	6,132	5,503	5,158
Equity	2,003	1,831	1,644	1,422	1,307
Net working capital	451	540	462	280	177
Net interest bearing debt	1,152	1,016	994	228	386

### Cash flow

<i>DKK million</i>	2015	2014	2013	2012	2011
Cash flows from operating activities	750	754	483	786	796
Cash flows from investing activities	-638	-585	-721	-342	-238
- Of which investments in property, plant and equipment	-589	-600	-664	-307	-209
Cash flows from financing activities	-99	-222	163	-247	-389
Change in cash and cash equivalents for the year	32	-14	-75	197	169

### Employees

<i>Number</i>	2015	2014	2013	2012	2011
Average number of employees	2,688	2,694	2,430	2,195	2,091

### Ratios

%	2015	2014	2013	2012	2011
Gross margin	42.9%	44.7%	45.0%	40.8%	43.5%
EBITDA margin	13.7%	16.3%	16.4%	15.1%	15.1%
EBIT margin	8.7%	9.9%	13.1%	11.3%	10.6%
Return on invested capital (ROIC)	16.0%	20.1%	31.0%	33.0%	26.5%
Equity ratio	27.8%	28.4%	26.8%	25.8%	25.3%
Return on equity	16.8%	25.3%	36.1%	30.4%	33.1%

2015 was a challenging year for Haldor Topsoe A/S.

The challenging market conditions affected our entire industry, but Topsoe maintained its market shares in 2015. The results do not meet our growth ambitions. During the year, a number of initiatives were implemented in order to reduce our cost base, the effect of which we saw already in the second half of 2015.

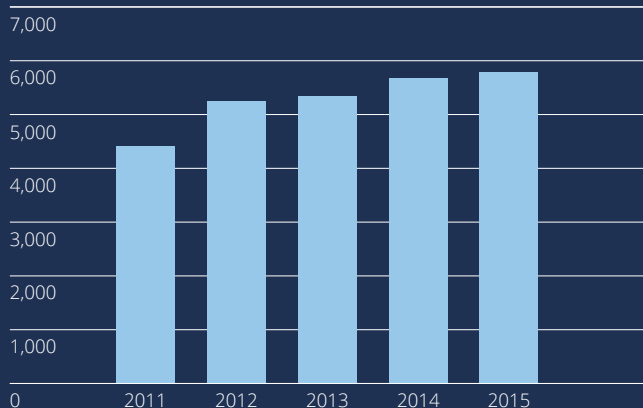
Despite the negative market conditions affecting our entire industry, it is positive that Topsoe maintained a strong operating cash flow (DKK 750 million).

EBIT decreased by 11% to DKK 502 million corresponding to an EBIT margin of 8.7% (2014: 9.9%).

R&D expense level was maintained at a high level with a R&D-to-revenue-ratio of 9.6% (2014: 10.6%).

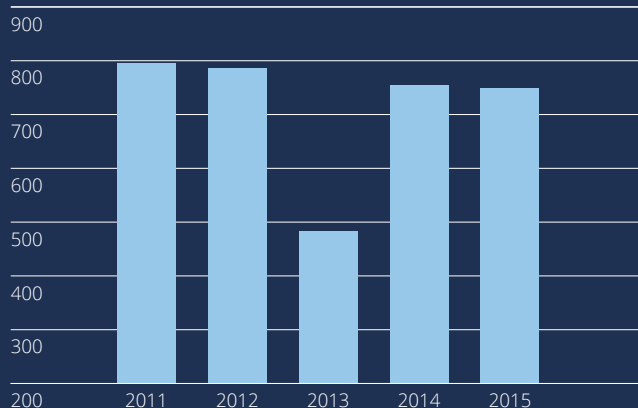
### Revenue

DKK million



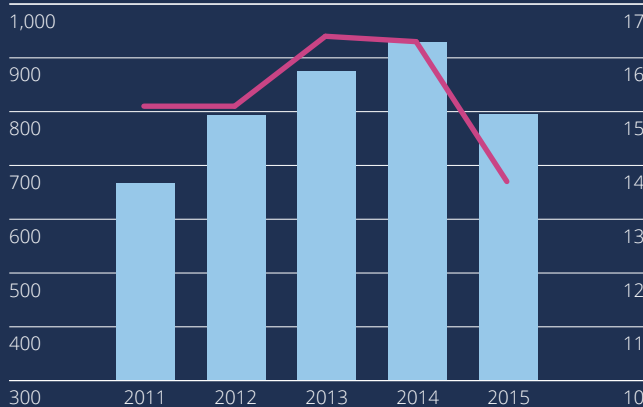
### Cash flow from operating activities

DKK million



### EBITDA

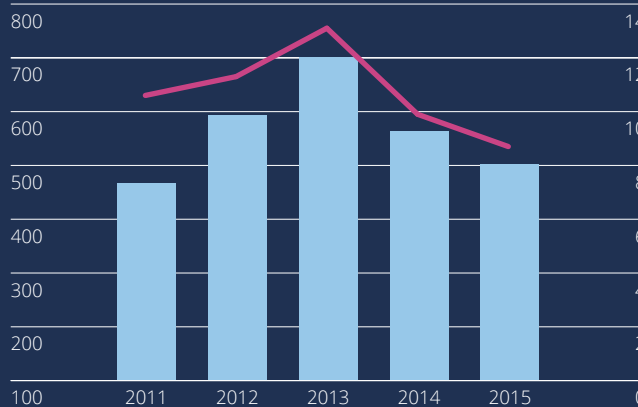
DKK million



■ EBITDA (left)  
 ■ EBITDA margin (right)

### EBIT

DKK million



■ EBIT (left)  
 ■ EBIT margin (right)

# Financial report

## Income statement

### Revenue

Revenue increased 2% to DKK 5,785 million (2014: DKK 5,685 million). The strengthened USD/DKK exchange rate impacted revenue positively by 6%. Revenue decreased by 4% in local currencies. The revenue development was negatively impacted by difficult market conditions as a result of reduced global growth and geopolitical events. Catalyst revenue increased by 2%, and technology revenue increased by 1%. Market shares were generally maintained in 2015.

### Earnings before interest, tax, depreciation, and amortization (EBITDA)

EBITDA decreased by 14% to DKK 795 million, corresponding to an EBITDA margin of 13.7% (2014: 16.3%).

Staff expenses increased by 5% to DKK 1,688 million. In August 2015, a general staff reduction was effectuated and approx. 160 jobs were made redundant. Related redundancy costs of DKK 44 million have been accounted for in 2015. Also, a number of other cost saving activities were initiated. Raw materials (incl. changes in inventories) were at the same level as in 2014. Purchased equipment for contract work increased by 15% to DKK 400 million due to increased equipment content in our technology offerings. Other external expenses increased by 7% to DKK 1,198 million.

### Earnings before interest and tax (EBIT)

EBIT decreased 11% to DKK 502 million corresponding to an EBIT margin of 8.7% (2014: DKK 563 million and an EBIT margin of 9.9%). Adjusting for the DKK 151 million loss incurred in 2014 in relation to the closure of Topsoe Fuel Cell A/S (TOFC) and the cost of DKK 44 million in connection with the lay-offs made in 2015, EBIT decreased by DKK 167 million, or 24%, compared to 2014. Depreciation decreased by

20% to DKK 293 million, mainly due to asset impairment of DKK 123 million in 2014 related to the closure of Topsoe Fuel Cell, whereas ordinary depreciation increased due to completion of new production lines in Denmark and China.

### Net profit

Net profit decreased 27% to DKK 322 million (2014: DKK 440 million).

The reduction in net profit is explained by:

The reduction in EBIT to DKK 502 million in 2015 (2014: DKK 563 million). Dividend from KAFCO decreased by 50% to DKK 26 million. There were negative net exchange adjustments of DKK 17 million (2014: DKK 11 million).

Net interest decreased by DKK 10 million as a result of lower market interest rates and margins.

Tax increased by DKK 3 million to DKK 140 million.

## Cash flow and balance sheet

### Cash flows from operating activities

Cash flows from operating activities were maintained at a high level and amounted to DKK 750 million (2014: DKK 754 million). Working capital was reduced by DKK 146 million and net working capital amounted to 7.8% of revenue (2014: 9.5%).

### CAPEX

CAPEX increased by 9% and amounted to DKK 702 million (2014: DKK 644 million). Two new production lines in Tianjin, China, and Joinville, Brazil, were being constructed in 2015.

### Net indebtedness

Net indebtedness increased by 13% and amounted to DKK 1,152 million (2014: DKK 1,016 million).

The interest bearing debt at the end of 2015 was DKK 2,104 million (2014: DKK 1,936 million).

Surplus funds for an amount of DKK 375 million were placed with the holding company, Haldor Topsøe Holding A/S, as part of a cash pool arrangement (2014: DKK 467 million).

### Return on invested capital (ROIC)

ROIC amounted to 16% (2014: 20%).

## Order backlog

The order backlog at the end of 2015 was at a satisfactory level covering a major part of our engineering and catalyst production capacity for 2016. The lifting of sanctions on Iran is expected to have a significant positive impact on the order backlog due to re-start of projects previously impacted by sanctions as well as new orders.

## Outlook for 2016

### Revenue

Revenue in 2016 is expected to be in line with or slightly above 2015 revenue.

### EBIT

EBIT margin is expected to increase in 2016 compared to 2015. EBIT is expected to be positively impacted from re-started Iranian contracts due to the lifting of sanctions on Iran in 2016.

We expect to maintain a high level of R&D and business development activities in 2016 of 9-10% of revenue.

Start-up of new production lines in China and Brazil may have a negative short-term impact on EBIT.

In the second half of 2015, actions were taken to reduce our cost base. This will have a positive influence on the 2016 result.

### Cash flow and funding

Operating cash flows are expected to continue to be strong. Topsoe's current funding position is strong, based on access to the corporate bond market, institutional banks as well as commercial banks. In addition to refinancing initiatives taken in 2015, Topsoe will actively pursue attractive refinancing options in 2016.

As part of the corporate bond issuance in 2013, Topsoe was credit rated as an investment grade company in shadow ratings performed by two major Nordic banks. These shadow ratings have been maintained throughout 2014 and 2015.

Topsoe intends to maintain a credit profile that matches that of an investment grade company during a business cycle. When market terms are attractive and there is a need, Topsoe will consider issuing additional corporate bonds as well as obtaining other credit facilities.

### Forward-looking statements

Haldor Topsoe A/S' financial reports, whether in the form of annual reports or interim reports, filed with the Danish Business Authority and/or announced via the company's website, as well as any presentations based on such financial reports, and any other written information released, or oral statements made, to the public based on this annual report or in the future on behalf of Haldor Topsoe A/S, may contain forward-looking statements.

These forward-looking statements are based on current plans, estimates and projections. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, which may be outside Haldor Topsoe A/S' influence, and which could materially affect such forward-looking statements.

Haldor Topsoe A/S cautions that a number of factors, including those described in the risk management part of this report, could cause actual results to differ materially from those contemplated in any forward-looking statements.



# Risk management

## Enterprise risk management

Since 2013, Haldor Topsoe A/S has operated an enterprise risk management program with quarterly reporting from business and resource units to Executive Management, followed up by reviews and mitigating activities. In 2013, Topsoe prepared a description of the various risks as part of the company's corporate bond issuance. This risk factor description can be found as part of the company description on [www.topsoe.com](http://www.topsoe.com).

During 2014, the Topsoe Code of Conduct was implemented throughout the entire organization, including policies covering anti-corruption, competition law and other compliance issues. During 2015, a Corporate Social Responsibility (CSR) & Sustainability policy has been implemented.

The policy for the gender composition of management can be found on <http://www.topsoe.com/about/corporate-social-responsibility-sustainability>

The general risk factors and the associated mitigating actions are outlined below.

## Strategic operational risks

### Customer demand

Based on our continued development of current as well as new products and processes, we expect demand to be strong. Catalysts are involved in the vast majority of the world's chemical processes today, and we see no indication of reduced demand or substitutes. For new products, processes and services being developed, we are depending on market demand picking up in order to increase our sales.

### Intellectual Property (IP) protection

As a highly innovative company, Topsoe pursues IP protection through

for instance patents, trade secrets, trademarks, design and copyright law. Our IP could, however, be challenged, invalidated, circumvented or rendered unenforceable. Defending and prosecuting our IP rights are therefore of paramount importance.

### Raw material prices and availability

The cost of raw materials is a significant cost component in our products, and prices can fluctuate considerably.

We seek to mitigate this risk through escalation clauses in customer contracts. The escalation clauses are linked to market indices. In addition, we use financial hedging to a certain extent. Moreover, we seek to have multiple suppliers for each raw material. We are exposed to single source risk on some raw material supplies, which makes us volatile to cost increases. We work actively to limit the single source exposure.

### Operational risks

Topsoe's production of catalysts takes place in Frederikssund, Denmark, Houston, US, Tianjin, China, and from 2016 also Joinville, Brazil. If, for some reason, production is closed down for an extended period in one of our operational plants, or if commissioning of new plants is substantially delayed, it will have a material impact on Topsoe's earnings. We seek to mitigate this risk by having multiple production lines for certain products as well as a safety stock policy. We have also taken out business interruption insurance and property insurance, etc.

Topsoe is exposed to project execution risk on technology projects. Systematic project management is performed in order to limit risk of delayed deliveries, re-engineering, and cost overrun.

Issuance of bonds in support of contractual liabilities is an inherent and

necessary part of Topsoe's business model, for instance in the form of bid bonds, advance payment bonds and performance bonds issued by banks on behalf of Topsoe. Risk mitigation is obtained via thorough structuring of contracts and related bonds. Such bond issuance will also be a part of the Ferrostaal Topsoe Projects business model when projects materialize.

### Insurance

Besides property insurance and business interruption insurance, a number of other operational risks are insured, including general liability and product liability as well as professional indemnity and transportation.

## Geopolitical risks

Topsoe's global presence exposes earnings to geopolitical events. Political actions, such as trade barriers, embargoes, new taxes, currency restrictions, the passing of environmental legislation, etc., may impact results and cash flows. This risk is to a certain degree mitigated through the monitoring of regulatory initiatives, geographical diversification, and by ensuring – to the extent possible – that cash flows are maintained positive for our individual contracts.

## Financial risks

### Currency risks

As Topsoe operates globally, the income statement, balance sheet, and cash flows are subject to the risk of currency fluctuations, mainly in relation to Topsoe's flows of EUR and USD.

Part of the risk is mitigated through natural hedges arising from activities where Topsoe has both income and expenses in the same currency. However, the risk is not fully covered by natural hedges, and consequently Topsoe hedges certain future cash



flows. A 5% increase in the USD/DKK exchange rate is assessed to have a positive EBIT effect of DKK 20-25 million.

**Interest rate risk**

Long-term debt consists of loans and bonds with fixed and floating interest rates. In order to secure a distribution between fixed and floating rate debt that matches the asset distribution, interest rate swaps are applied. For the floating rate portion of Topsoe's interest bearing debt, a change in the interest rate level of 1 percentage point will increase interest expenses by DKK 12 million.

**Credit risk**

The credit risk of Topsoe is primarily related to trade receivables relating to state-owned as well as privately owned corporations. We seek to mitigate credit risk by applying instruments such as letters of credit and bank guarantees as well as selective structuring of payment terms etc.

**Counterparty risk**

In this context, counterparty risk is defined as credit risk on financial institutions when dealing with them, either by placing deposits, entering into derivative financial instrument transactions or otherwise. In order to reduce counterparty risk, Topsoe only deals with financial counterparties, which – based on Management's assessment – have a satisfactory credit rating from a recognized international credit rating agency.

**Liquidity risks**

Topsoe must maintain sufficient liquidity to fund daily operations, debt service, and for future expansion purposes. Topsoe's access to liquidity consists of cash and cash equivalents, including access to credit facilities.

**Restrictive covenants**

Some of the financing arrangements of Topsoe are subject to financial covenants, and if violated, this could limit the ability to finance the company's

operations and capital needs for pursuing acquisitions and other business activities. Covenants include equity ratio, interest coverage and leverage (net debt/EBITDA) requirements.

**Dividend policy**

Since 2007, the Haldor Topsoe Group has financed the operations of Haldor Topsøe Holding A/S through dividend payments. The liquidity effect of the expected future dividend payments has been incorporated in the cash flow forecasts of Topsoe.

**Tax**

Topsoe is exposed to a large number of different tax regimes across the countries in which we operate, and there is a risk of unexpected taxation due to uncertainty of the interpretation of local tax regulations. To mitigate this risk, Topsoe consults external advisors.

# Topsoe strategy – Unlocking our potential

In September 2015, Topsoe's corporate strategy was revised and launched under the title 'Unlocking Our Potential'. The revised strategy addresses changes in the geopolitical and macroeconomic climate and new demands in the market. It focusses on commercial excellence, customers' needs, and market-driven innovation.

The last few years, the world and the markets in which Topsoe operates have developed rapidly. Political and economic unrest affect our sales. Customers' needs and demands are changing, and their buying patterns are different than before. It is no longer enough to have superior products and technologies – today, customers demand more integrated solutions. We listen to our customers and focus on delivering the solution they request.

## Prioritization

Topsoe develops numerous products and processes that can help our customers solve challenges within energy efficiency, climate, the environment, and food supply. The strategy gives directions for capturing and unlocking the full potential of those core competencies – while delivering profitable growth and developing new business opportunities and capabilities.

The key word in Unlocking Our Potential is 'prioritization'. We will prioritize our ambitions, resources and future projects wisely to fully realize our potential.

## Strategic headlines

We will deliver **profitable growth** by growing both revenue and profit. To achieve this, we will be cost aware and

optimize our productivity as well as invest to strengthen our global leadership position within our core business. In addition, we will pursue new business opportunities in areas related to our core competencies, such as more extensive services and operation & maintenance.

*"Today, customers demand more integrated solutions. We listen to our customers and deliver the solution they request"*

Geopolitical unrest and reduced growth in emerging markets has limited the number of global technology projects, but we have not lost market shares. We have identified new focus areas, as long as the number of new large projects is not as significant as before.

For instance, we are a global leader in revamping of existing ammonia plants and seek to expand our hardware offerings. Demand for additional large technology projects is driven by global macro trends such as population growth, increased energy consumption, and stricter environmental regulations. We are convinced that new

technology projects will emerge when the geopolitical situation stabilizes in various regions of the world.

We need to **grow faster than the market** to secure our global leadership position. We will prioritize which business areas (or segments) we en-

gage in, with focus on our competitive strength and market prospects.

Our newly established project development joint venture, Ferrostaal Topsoe Projects GmbH, will assist project owners with project development within our area of expertise. Also, we are actively considering other commercial opportunities within **partnering & acquisitions**.

Innovation is a deeply rooted mindset in Topsoe and it is essential to our success. Unlocking Our Potential defines how to ensure **market-driven innovation**. In dialog with our customers, we develop what they require



## STRATEGIC ACTIONS



**DELIVER  
PROFITABLE  
GROWTH**



**GROW  
FASTER THAN  
THE MARKET**



**PARTNERING &  
ACQUISITIONS**



**MARKET DRIVEN  
INNOVATION**



**COMMERCIAL  
EXCELLENCE**



**SAFETY  
FOCUS**

and continue to bring new products to market fast.

Another focus area is **commercial excellence** where we base our sales and marketing effort on strategic, cross-organizational marketing objectives. We will continue to adapt our global brand positioning, and we will provide customers with integrated solutions,

based on our world-leading products or technologies.

Moreover, **safety** obviously remains a key priority. Our intention is to reach zero lost time accidents in 2018 and thus perform better than our industry on average.

With the revised strategy Topsoe has a fresh roadmap to respond to changes in customer demand and the geopolitical and economic challenges in our markets in the best possible way – with a firm focus on profitable growth.

# Outstanding **flexibility** makes JSC Ammoni demand another co-production plant

Joint Stock Company Ammoni took over operations of their ammonia and methanol co-production plant in 2015 as planned.

Ammoni's plant is one of a handful in the world that features Topsoe IMAP Ammonia+ technology, which provides exceptional production flexibility. The plant can produce up to 2,050 metric tons per day (MTPD) of ammonia only, or up to 668 MTPD of methanol together with 1,382 MTPD of ammonia.

"We are very pleased with the plant and at present investigating the possibility of building an additional co-production unit. The flexibility of Topsoe's technology and the customization to our needs have definitely been important factors along with the excellent quality of the plant design and

construction by Topsoe's licensed contractor, Mitsubishi Heavy Industries, Ltd. The plant performance has been flawless, satisfying performance guarantees," says Mr. Rinat Khanbikov, Chairman of the Board of Directors, JSC Ammoni.



JSC Ammoni can produce only ammonia or both ammonia and methanol in their co-production plant in Tatarstan.



UPM Lappeenranta Biorefinery in Finland is the first in the world to produce renewable transportation fuel on a commercial scale using 100% tall oil.

# Renewable diesel from pulp residue **lowers emissions**

UPM, a Finnish company integrating bio and forest industries, aims to utilize the entire lifecycle of wood-based biomass as efficiently as possible.

UPM BioVerno diesel is a perfect example of efficient use of biomass. This renewable diesel is made from tall oil, which is a residue from the company's own pulp production processes. Not only is waste converted into a high-value fuel, the renewable diesel also reduces CO<sub>2</sub> and tail pipe emissions significantly.

UPM Lappeenranta Biorefinery is the first in the world to produce renewable transportation fuel on a commercial

scale using 100% tall oil. The facility uses hardware, catalysts and technology licensed by Topsoe.

"We wanted a partner with insight into both the catalytic process and the technology around it. Topsoe was able to deliver an integrated solution with optimal interplay between catalyst, hardware and supporting services. In January 2015, we started commercial production of UPM BioVerno die-

sel, and the product has been very well received in the markets," says Petri Kukkonen, Vice President, UPM Biofuels.

UPM is a major forest owner with extensive expertise in wood sourcing. The principles of sustainable development are followed in all the company's processes from forest management to chain of custody and forest certification.

# Science and Technology: Turning customer pains into **gains**

At Topsoe, we are dedicated to market-driven innovation – identifying how we can help our existing and future customers to improve value creation by applying the company's unique knowledge within catalysis and complex chemical engineering.

The starting point for the majority of business opportunities is the everyday pains and challenges that our customers face. Thus, innovation starts in the front-line through the many Topsoe employees who provide on-site technical support, optimize productivity, or discuss business opportunities and threats in their daily interaction with their peers in the industry. Their feedback is all-important to identify the customer pains that Topsoe's scientific insights can relieve.

## **From pain to gain**

When a reported customer pain has been scrutinized and found relevant for new product development, it is handed over to a handpicked cross-functional team, which includes science, technology and production specialists as well as business developers. At all times, these teams are work-

ing on a considerable portfolio of new business opportunities in all maturity phases, involving potential customers and partners in the process through prototype/pilot testing etc. The end result is change – change from customer pain to customer gain. The quality and progress of the project portfolio is monitored closely to ensure that resources are used on relevant products, and that new products reach the market as fast as possible.

## **Strong pipeline**

In 2015, Topsoe brought many new products to the market – ranging from products supplementing the existing offerings to our customers within the segments Chemicals, Environmental and Refinery to products opening up entirely new offerings for new customer segments. The majority of the new products launched in 2015 relate

to businesses in our Environmental or New Business Units, which reflects both the market demand for solutions that secure compliance with increasingly strict environmental regulations and Topsoe's ability to create new solutions and expand offerings.



## New R&D activities strengthen presence in China

In 2015, Topsoe expanded its presence in China within research & development, as we established a framework collaboration agreement with the

renowned Dalian Institute for Chemical Physics (DICP) – the leading Chinese catalysis research institute and the world's largest catalysis R&D center. A number of collaboration projects have been initiated in 2015, and this has paved the way for a dedicated Topsoe R&D center at DICP, which opened January 1, 2016.

*"Investments in catalysis research in China are huge and the scientific level is high, so this partnership is important for our future success in China, both scientifically and commercially. We believe that this initiative will enable R&D*

*alliances with Chinese business partners and strengthen our market and technology access,"* says Jesper Nerlov, Chief Technology Officer, Topsoe.

Collaboration projects with leading researchers at DICP will strengthen Topsoe's scientific level and enable research projects specifically aimed at Chinese scientific and technological challenges.



eCOs is a unique solution that produces CO gas on-site in a mobile unit that fits standard shipping containers.

## Innovation reduced risk and **increased profit**

Carbon monoxide (CO) is needed for a variety of production processes in the chemical and electronics industries. Unfortunately, the gas is lethal and highly reactive, making it difficult and dangerous to store and transport.

Topsoe's scientists and engineers have in-depth knowledge of the problematic properties of the widely used gas, as the company has delivered solutions for world-scale CO plants for years. So it was decided to develop a safer solution for small-scale users that until now have relied on transported CO.

The technology is called eCOs – a mobile, on-demand and on-site solution that eliminates the problems associated with transport and storage of CO.

Based on Topsoe's insight into syngas generation technology, hardware and catalysts, the R&D team designed a new production process that substituted the standard feedstock, natural gas, with the greenhouse gas CO<sub>2</sub>. The small-scale solution fits a standard shipping container, which is easy to move to the site where the CO gas is needed.

In 2015, the commissioning of the first eCOs system was initiated in collaboration with Gas Innovations, a provider of industrial gases based in Texas, US. Early test production has confirmed that the eCOs process delivers the expected output at a very attractive cost.



TIGAS™ is a Topsoe process that allows customers to produce high-quality gasoline from natural gas, shale gas, associated gas, coal, pet-coke or biomass.

# Stranded natural gas converted into gasoline

It takes specialized solutions to monetize natural gas reserves in very remote areas. That is also the case in Turkmenistan, the location of the world's first full-scale plant to convert part of the country's huge, but isolated natural gas reserve into valuable gasoline with Topsoe's TIGAS™ technology.

"This is certainly among the most attractive ways to exploit Turkmenistan's natural gas that we have been able to identify," says Mr. Shinichi Sato, Manager of Chemical Plant Sales Section, Kawasaki Heavy Industries Ltd.

The plant is expected to produce up to 15,500 barrels of gasoline when it becomes operational in 2018.

Synthetic gasoline made using TIGAS™ meets the highest standards and can be poured directly in the tank of a car. The technology is most interesting for stranded natural gas reserves and large shale gas deposits. However, the technology has been proved in several small-scale productions, including gasified biomass as feedstock instead of natural gas.

The construction of the plant takes approximately four years.

# Joining forces for greater impact

Sometimes, one plus one equals more than two. Strategic partnerships and acquisitions are key components in Topsoe's ambition for growth.

Partnerships and acquisitions are expected to contribute to Topsoe's growth in several ways, but common for all is that they must always 1) complement or add synergy to Topsoe's core business and 2) serve to expand market share, technology portfolio or service offerings to customers.

Partnerships and acquisitions are efficient additions to organic growth – either by fast-tracking the company's entry into adjacent markets or technologies – or building and growing new business platforms.

## Partnering for major industrial projects

In March 2015, Topsoe announced the establishment of Ferrostaal Topsoe Projects GmbH, a joint venture between Topsoe and Ferrostaal Industrial Projects, specialists within project development, procurement, and financial services for the realization of industrial plants.

The joint venture represents strategic partnering at a new level for Topsoe. Rather than establishing a partnership around a specific product or technology, Ferrostaal Topsoe Projects will focus on realizing major industrial projects in the petrochemical, refining and environmental sectors. Fast-growing emerging economies around the world will be the primary market focus, but North America is also expected to hold business potential for the new partnership.

Topsoe and Ferrostaal had already been working successfully together for some time before the joint venture. In October 2015, the collaboration resulted in a major step toward the realization of a billion-dollar project in Tanzania.

A consortium of Ferrostaal Industrial Projects GmbH, Haldor Topsoe A/S and Fauji Fertilizer Company Ltd. entered into a joint venture with Tanzania Petroleum Development Corporation to realize the country's first fertilizer plant. The agreement is an important step towards the financing agreement and initiation of the engineering and construction project. Topsoe will deliver engineering design, licensing, proprietary hardware, catalysts and engineering services.

## Combining strengths to market new products

In April 2015, Topsoe entered into a partnership with Unifrax, a US-based manufacturer of specialty fiber products, to begin a joint global effort to market a unique line of ceramic catalytic filter candles.

The partnership combines Topsoe's expertise within catalysis and Unifrax's strengths within fiber filtration. Together, the companies market the TopFrax™ technology that offers improved filters for catalytic hot gas filtration in a broad range of industries – including glass, cement, biomass, waste incineration, and metal production.

The ceramic filter candles will be manufactured at Unifrax's production facilities in the UK and subsequently shipped to Houston, Texas. Here, the filters will be catalyzed at Topsoe's catalyst production site, which will be expanded with an entirely new production line dedicated to the production of the catalyzed ceramic filters. The product will be sold through Topsoe under the brand TopFrax™.

## Acquisition boosts technology offerings

In August 2015, Topsoe signed an agreement with Increase Performance Inc. to acquire full ownership of the Furnace Manager technology. The acquisition is an important expansion of the technology offerings and service packages to Topsoe's global client base – especially in the Chemical Business Unit (CBU).

Topsoe Furnace Manager combines camera technology and temperature measurement in an automated system that allows round-the-clock monitoring of the interior of furnaces, operating at extremely high temperatures.

With the monitoring system, tube temperature and burners can be monitored without accessing the furnace, avoiding manual inspection of the furnace. Continual monitoring rather than spot checks allows customers to optimize operational efficiency, while intelligent controls and warnings allow corrective action, thereby avoiding





Klaus Lesker, Managing Director of Ferrostaal GmbH (to the left), and Bjerne S. Clausen, CEO of Haldor Topsoe A/S, confirm the joint venture Ferrostaal Topsoe Projects GmbH.

damage to equipment and significantly improving the safety of the operating personnel.

### **Electrifying partnership**

Improved rechargeable batteries are imperative for the use value of electric vehicles, smartphones and other mobile equipment that holds obvious environmental and practical advantages. Topsoe's expertise can be used to develop better cathode materials for advanced rechargeable batteries, and that was the backdrop for establishing a partnership with Faradion Ltd., a UK battery technology company, in 2014. Since then, Topsoe has co-developed

and up-scaled key parts of Faradion's technology that replaces lithium with the more commonly available, sustainable, and much less expensive metal sodium. A proprietary production process has been developed, and we are now able to produce Faradion's second generation cathode material in the 100 kg scale – an important step towards industrial production. In May 2015, the world's first sodium-ion powered vehicle, an e-bike, was successfully demonstrated by Faradion.

Topsoe is a minority shareholder in Faradion and has the right to manufacture and sell cathode materials under license from Faradion.

# Global catalyst production **ramp-up**

In 2015, Topsoe continued to expand its catalyst production capacity to meet the demands from new and existing markets. Two new catalyst production sites were established and the existing production sites boosted the capacity of the current production lines.

Topsoe's four catalyst production sites are closely knit into one global supply chain covering four continents. Together, they make it possible to deliver the entire catalyst product portfolio around the globe. However, new production sites are also being built to meet specific local demands.

This is the case in Tianjin, China, and Joinville, Brazil, where smog problems and increasingly strict local legislation drive demand for catalysts for heavy duty diesel engines. The Tianjin plant delivered the first batches of the catalysts in October 2015, and the Joinville plant will follow suit in the first half of 2016.

Our existing production sites in Frederikssund, Denmark, and Bayport, Texas, have been expanded in the past year. This includes catalysts to control NOx emissions from power plants and industry, catalysts for the refining industry, automotive catalysts and catalysts to produce sulfuric acid and methanol.

## **Expanding to support new market opportunities**

In 2015, the Bayport production site near Houston, Texas, increased production volume significantly. The site produces catalysts used in the refining of oil into gasoline and diesel, clean emissions from coal-fired power plants and to produce sulfuric acid, which is used for fertilizer.

The shale gas production in the US has been a deciding factor in the increased demand from the refining industry. To benefit from the access to low-cost natural gas, refiners needed the right technology. Topsoe responded with a new catalyst that allows better utilization of the cheap and abundant hydrogen made from shale gas. The new catalyst combined with sufficient hydrogen enabled refiners to create volume swell for diesel, gasoline, and other high-value refining products.

The new catalyst is an example of how Topsoe supports customers to maximize their efficiency and exploit new

market opportunities fast by providing relevant and efficient technical solutions – and investing in the production capacity needed to deliver. The response from the market has made the new catalyst the fastest-selling new product in Topsoe's history. Other Topsoe customers have also experienced a bottom-line boost from the introduction of shale gas, for instance customers in the syngas, ammonia and methanol industries.



## Topsoe production sites

- Frederikssund, Denmark  
Production start: 1963  
**570 employees**
- Bayport, Texas  
Production start: 1965  
**165 employees**
- Tianjin, China  
Production start: 2015  
**51 employees**
- Joinville, Brazil  
Production start: 2016  
**12 employees**

## Safety

Safety is a top priority at all Topsoe production sites – and in the corporate strategy. In 2015, safety was improved significantly, as the number of lost time accidents was reduced from 25 in 2014 to 13 in 2015. A lost time accident is an accident at the workplace, which results in the employee being absent from work for one or more days.

# CSR – part of what we do

Topsoe was founded on the belief that innovation and technology can help solve some of the fundamental global challenges. Guided by our CSR policy, we also work to make corporate social responsibility and sustainability an integrated part of our business and the way we work.

Topsoe's Corporate Social Responsibility (CSR) policy from June 2015 defines CSR & sustainability as follows: "Optimizing our customers' performance by developing sustainable solutions and products that address global challenges, while simultaneously balancing the economic, social and environmental aspects in our value chain".

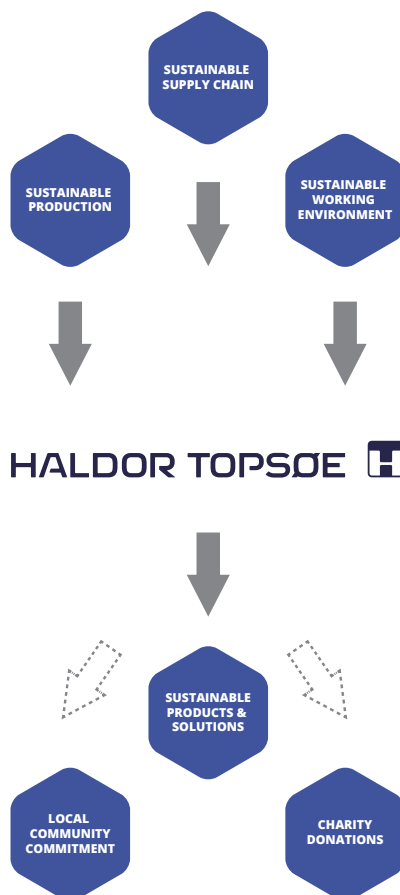
### From policy to actions

The policy outlines six areas that our CSR effort is centered on (see illustration). In 2015, Topsoe has focused on 'sustainable supply chain', 'sustainable production' and 'sustainable working environment'.

As a production company, Topsoe takes on a special obligation to promote safety in the workplace. Therefore, safety focus is a key priority in our corporate strategy.

A Global Safety Dashboard has been introduced to provide greater insight into the number and types of accidents across all Topsoe production units. The aim is to support a more proactive safety culture by sharing how accidents occur with focus on how to prevent them in the future.

Safety is not only important to Topsoe and our employees. To an increasing degree, customers see safety as an important competitive factor.



### Sustainable production – recycling

We work to reduce waste, costs, and to recycle precious raw materials. An example is that we recycle catalysts by grinding waste from the production process into a powder that is used as raw material for new catalysts that comply with Topsoe's strict quality requirements.

### Sustainable working environment – safety

Global initiatives are supported by local ones. In our US production unit, operators are trained as voluntary firemen so they can assist in firefighting at their workplace as well as in the neighboring area. Our new Chinese and Brazilian production plants have been constructed with special focus on safety and security. Our existing production site in Denmark has almost halved the number of accidents in 2015 thanks to initiatives such as risk assessments, training and supervision and using the 5S tool, which is part of the LEAN methodology.



Topsoe is part of a charitable foundation in the Tula region of Russia together with a local business partner. The aim is to support children with special talents.

# Charity helps kids realize their potential

Local community commitment is part of Haldor Topsoe A/S' CSR policy and a way to combine our business and global presence with charity. Supporting the development of children in societies where Topsoe operates has been a cornerstone for the company for many years.

One of Haldor Topsoe A/S' charity contributions is the Charitable Foundation of the Tolstoy, Topsøe and Sokol Families, which completed its first full year of activity to support talented children in the Tula region of Russia in 2015.

Gifted children must be stimulated and helped to unfold their potential. This is important, not only for the individual child and family, but also for the development of the entire community. It is also a way for Topsoe to contribute to societies that support the growth of Topsoe.

In the Tula region of Russia, the Foundation provides targeted support to gifted children in difficult circumstances through an individual approach to each child. Initially, the Foundation patronized 12 talented

children and during 2015, the number has grown to 20. To develop the children's abilities, the Foundation conducts master classes, contests, lessons and lectures. In 2015, this talented group of youngsters has taken many first prizes in competitions within sports, academia, dance, theater, music, and art.

### United in business and charity

The Foundation has been established by the Tolstoy, Sokol and Topsøe families, who share a common interest in the Tula region and the charitable work for children. Russia is an important market for Topsoe, and over the next years, the company will supply catalyst and equipment to projects in Russia including the Tula region.

Boris Sokol is President of OAO Shchekinoazot, a leading Russian

chemical company in the Tula region and an important business partner to Haldor Topsoe A/S. Both companies are passionate about giving back to the community and consider it very beneficial to unite in matters other than strictly business.

The Tolstoy family are descendants of the famous author behind "War and Peace" and has graciously supported the Foundation's work, including offered the use of their historic family mansion, Yasnaya Polyana.

Topsoe's charitable activities are based on Dr. Haldor Topsøe's devotion to children welfare and social responsibility. He is quoted for saying that *"the corporate world itself means nothing unless it improves the lives of people and the conditions in poor countries"*.

# Our leadership



## Haldor Topsoe A/S – Board of Directors



**Henrik Topsøe**  
Chairman

Henrik Topsøe joined Haldor Topsoe in 1974 and has held various R&D positions in the company. He was appointed Executive Vice President in 2008. Dr. Topsøe joined the Board of Directors in 1993 and became Chairman in 2013. Dr. Topsøe has received many honors and awards and has authored more than 180 scientific publications. He is a chemical engineer and holds a PhD from Stanford University. In 2013, he was elected Foreign Associate of the National Academy of Engineering (US).



**Jeppe Christiansen**  
Vice Chairman

Jeppe Christiansen is CEO of Maj Invest group and has previously been CEO of Lønmodtagernes Dyrtdsfond and Executive Director in Danske Bank. Mr. Christiansen is Vice Chairman of the Board of Directors at Novo Nordisk A/S and a member of the Board of Directors at Novo A/S, Kirkbi A/S and Symphogen A/S. He holds an MSc from the University of Copenhagen.



**Jørgen Huno Rasmussen**  
Vice Chairman

Jørgen Huno Rasmussen is Chairman of the Boards of TryghedsGruppen, Trygfonden, Tryg Forsikring A/S, LFI A/S, and the Lundbeck Foundation. He is Vice Chairman of the Boards of Terma A/S and Rambøll Group A/S. He is member of the Boards of Otto Mønsted A/S, Thomas B. Thriges Foundation, and Bladt Industries A/S. Mr. Rasmussen has previously been CEO of FLSmidth and Hoffmann A/S. He holds an MSc and a PhD from the Technical University of Denmark, and a Graduate Diploma in Business Administration from Copenhagen Business School.



**Jakob Haldor Topsøe**  
Member

Jakob Haldor Topsøe is Partner at AMBROX Capital A/S. He has previously been Head of Equities at ABN AMRO Bank in Denmark. Mr. Topsøe is Chairman of the Board of Haldor Topsøe Holding A/S and a member of the Boards of Haldor Topsoe Inc., Deltaq A/S, and Bollerup Jensen A/S. He holds a Graduate Diploma in Business Administration from the Copenhagen Business School.



**Christina Teng Topsøe**  
Member

Christina Teng Topsøe is an English qualified lawyer and previously practiced law in London and Singapore for Allen & Overy and Simpson, Thacher and Bartlett. Ms. Topsøe is a member of the board of Haldor Topsoe Holding A/S and owns The Four Horsemen restaurant in Brooklyn. She studied for a Bachelor's degree in Chinese from University of Copenhagen and Peking University and a LLB from University of London. She is currently pursuing a joint degree EMBA from London Business School and Columbia Business School.



**Jens Kehlet Nørskov**  
Member

Jens K. Nørskov is Professor of Chemical Engineering, Stanford University, and Director of the SUNCAT Center for Interface Science and Catalysis, also at Stanford University. Dr. Nørskov has previously been Professor at the Technical University of Denmark. He is a member of the editorial board of several journals and has received a large number of honors and awards. Dr. Nørskov is a member of several boards, advisory boards and professional organizations. He holds a PhD from Aarhus University.





**Henrik Stiesdal**  
**Member**

Henrik Stiesdal is a leading figure within wind power and has been CTO of Siemens Wind Power through 27 years until he retired in 2014. Mr. Stiesdal has received a large number of awards, including the Poul la Cour Prize of the European Wind Energy Association in 2011 and the German Renewables Award for Lifetime Achievements in Wind Energy in 2014. He has studied medicine, biology and physics at the University of Southern Denmark.



**Anders Heine Jensen**  
**Member**

Anders Heine Jensen is CEO of Burmeister Wain Scandinavian Contractors A/S. He has previously been Senior Director with DONG Energy. Mr. Jensen is a member of the Board of Danish Energy Industries Federation. He holds an MSc from the Technical University of Denmark and a bachelor's degree from Copenhagen Business School.



**Jette Søvang Christiansen**  
**Employee representative**

Jette Søvang Christiansen is Quality Assurance Manager in Catalyst Production.



**Aino Irene Saldo**  
**Employee representative**

Aino Irene Saldo is IT Project Manager in Finance, IT & Facility Management.



**Søren Toft**  
**Employee representative**

Søren Toft is Principal Engineer and Project Manager in Engineering Production.



**Martin Østberg**  
**Employee representative**

Martin Østberg is General Manager in Reforming Department, Research & Development.

## Haldor Topsoe A/S Executive Management

### **Bjerne S. Clausen** President and CEO

Bjerne S. Clausen has been President and CEO since 2011. He joined the Executive Management in 2006 as Director of Research & Development and became Executive Vice President of the Technology Division in 2008. Dr. Clausen joined Topsoe in 1979.

Dr. Clausen holds an MSc and a PhD in Materials Science from the Technical University of Denmark (DTU) and was awarded an honorary doctorate from DTU in 2014. Dr. Clausen is Adjunct Professor at both DTU and University of Aarhus, Denmark, and has been appointed Visiting Professor at the Business School of Nankai University, China.

Dr. Clausen has served on numerous research and industrial boards and committees, and he is currently Chairman of the Board of iNANO, the Interdisciplinary Nanoscience Center, University of Aarhus, and a member of the Advisory Board of the Department of Chemical Engineering, DTU.

### **Peter Thoft Knudsen** EVP, Environmental Business Unit

Peter Thoft Knudsen has been Executive Vice President, Environmental Business Unit, since 2012. He has held a number of positions in Topsoe's environmental unit, including Vice President.

Mr. Knudsen joined Topsoe in 2005 and before that he has been with Elsamprojekt, Anhydro, Novo Nordisk Engineering, and FLS Miljø.

Mr. Knudsen holds an MSc from the Technical University of Denmark and a bachelor's degree in Business Administration.

### **Peter Rønne Andersen** CFO

Peter Rønne Andersen joined Topsoe as Executive Vice President and Chief Financial Officer in 2013. Before that, Mr. Andersen has been with the Maersk Group for more than 20 years, including 15 years as CFO and member of the executive leadership team in various business units, including Maersk Line.

Mr. Andersen holds an MSc in Economics from the University of Aarhus, and an Executive MBA from IMD, Switzerland. He has completed leadership training at Cranfield School of Management, Penn State University, and Harvard University.

### **Per K. Bakkerud** EVP, Chemical Business Unit

Per K. Bakkerud has been Executive Vice President, Chemical Business Unit, since 2014. Previously, he has been Managing Director of Haldor Topsoe's Chinese operations and Vice President in the Technology Division. Mr. Bakkerud joined Topsoe in 1990 and before that he had positions with Det Norske Veritas, Norwegian Petroleum Consultants and ExxonMobil.

Mr. Bakkerud holds an MSc from the Technical University of Norway.

Mr. Bakkerud is the President of Energy Frontiers International and serves on the Board of Directors of the Natural Gas Conversion Board.

### **Morten Schaldemose** EVP, Refinery Business Unit

Morten Schaldemose has been Executive Vice President, Refinery Business Unit, since 2013. He has held a number of positions in Topsoe centered on the refinery business, including Head of Marketing and Sales. Mr. Schaldemose joined Topsoe in 1997 after working at Kuwait Petroleum International. From 2008 to 2013, he served as COO and CEO of a number of cleantech companies before rejoining Topsoe.

Morten Schaldemose holds an MSc from the Technical University of Denmark and an EMBA with distinction from INSEAD.

### **Kim Grøn Knudsen** EVP, New Business Unit

Kim Grøn Knudsen is Executive Vice President, New Business Unit. He has been a member of the Executive Management since 2012. He has held a number of positions within Topsoe's Research & Development unit, including Vice President. Mr. Knudsen joined Topsoe in 1996, leaving a position as Research Associate Professor at the Technical University of Denmark.

Mr. Knudsen holds a PhD from the Technical University of Denmark.

Mr. Knudsen holds several patents and is the author or co-author of more than 55 papers.



Morten Schaldemose [top left], Kim Grøn Knudsen [top center], Peter Thoft Knudsen [top right], Per K. Bakkerud [middle left], Peter Rønnest Andersen [middle right], Bjerne S. Clausen [front center],



# Financial statements

## Consolidated income statement

<i>DKK million</i>	Note	2015	2014
<b>Revenue</b>	2	<b>5,785</b>	<b>5,685</b>
Change in inventories of finished goods and intermediate products		-1	-117
Other operating income		34	63
Purchased equipment for contract work		-400	-348
Raw materials and consumables used		-1,737	-1,624
Other external expenses		-1,198	-1,117
<b>Gross profit</b>		<b>2,483</b>	<b>2,542</b>
Staff expenses	3	-1,688	-1,613
<b>EBITDA</b>		<b>795</b>	<b>929</b>
Depreciation, amortization and impairment losses	4	-293	-366
<b>EBIT</b>		<b>502</b>	<b>563</b>
Result of investment in joint venture	5	-9	0
Financial income	6	146	124
Financial expenses	7	-177	-110
<b>Profit before tax</b>		<b>462</b>	<b>577</b>
Tax	8	-140	-137
<b>Net profit</b>		<b>322</b>	<b>440</b>
Profit attributable to:			
Owners of the parent company		354	444
Non-controlling interest		-32	-4
<b>Net profit</b>		<b>322</b>	<b>440</b>

## Consolidated statement of comprehensive income

<i>DKK million</i>	2015	2014
<b>Net profit</b>	<b>322</b>	<b>440</b>
Foreign currency translation adjustment	97	88
Derivative financial instruments used for hedging of future cash flows	-11	-24
Tax on this	-3	0
Realized derivative financial instruments transferred to financial gain/loss	23	16
Fair value adjustment of financial assets available-for-sale	-27	-21
Tax on this	0	0
Tax adjustment on revaluation of land and buildings	6	0
<b>Items that may be reclassified to the income statement</b>	<b>85</b>	<b>59</b>
Actuarial adjustments on pension obligations	-12	-24
Tax on this	4	8
<b>Items that may not be reclassified to the income statement</b>	<b>-8</b>	<b>-16</b>
<b>Other comprehensive income</b>	<b>77</b>	<b>43</b>
<b>Total comprehensive income</b>	<b>399</b>	<b>483</b>
<b>Attributable to:</b>		
Owners of the parent company	422	487
Non-controlling interests	-23	-4
<b>Total comprehensive income</b>	<b>399</b>	<b>483</b>

## Consolidated balance sheet

<b>Assets</b>		December 31	December 31
<i>DKK million</i>	<b>Note</b>	<b>2015</b>	<b>2014</b>
Rights		24	0
Patents		40	35
Software		49	32
Intangible assets under construction		2	8
<b>Intangible assets</b>	<b>9</b>	<b>115</b>	<b>75</b>
Land and buildings		776	705
Plant and machinery		1,119	941
Other fixtures and equipment		279	262
Property, plant and equipment under construction		540	457
<b>Property, plant and equipment</b>	<b>10</b>	<b>2,714</b>	<b>2,365</b>
Investment in joint venture		30	0
Other securities and investments		388	414
Other receivables		55	42
<b>Investments</b>	<b>11</b>	<b>473</b>	<b>456</b>
<b>Non-current assets</b>		<b>3,302</b>	<b>2,896</b>
<b>Inventories</b>	<b>12</b>	<b>1,227</b>	<b>1,155</b>
Trade receivables	13	1,201	867
Contract work in progress	14	91	127
Receivables from the parent company	15	617	750
Other receivables	16	144	167
Prepayments		35	40
<b>Receivables</b>		<b>2,088</b>	<b>1,951</b>
<b>Cash</b>		<b>577</b>	<b>453</b>
<b>Current assets</b>		<b>3,892</b>	<b>3,559</b>
<b>Assets</b>		<b>7,194</b>	<b>6,455</b>



## Consolidated balance sheet

<b>Equity and liabilities</b>		December 31	December 31
<i>DKK million</i>	<b>Note</b>	<b>2015</b>	<b>2014</b>
Share capital	17	376	376
Revaluation reserve	18	228	222
Foreign currency translation reserve	18	135	47
Reserve for unpaid share capital	18	241	241
Reserve for value adjustment of hedging instruments	18	-5	-14
Reserve for value adjustment of financial assets available-for-sale	18	255	282
Retained earnings		773	677
<b>Equity attributed to the owners of the parent company</b>		<b>2,003</b>	<b>1,831</b>
Non-controlling interest		71	94
<b>Total equity</b>		<b>2,074</b>	<b>1,925</b>
Pension obligations and similar obligations	20	90	71
Deferred tax	21	447	432
Provisions	22	206	196
Bonds	23	996	996
Mortgage debt	23	71	81
Credit institutions	23	830	617
Deferred income	23	11	8
Other payables	24	5	7
<b>Non-current liabilities</b>		<b>2,656</b>	<b>2,408</b>
Bonds	23	0	17
Mortgage debt	23	10	10
Credit institutions	23	197	215
Deferred income	23	1	3
Prepayments from customers	25	357	437
Contract work in progress	14	1,061	660
Trade payables		398	350
Corporate income tax		14	29
Other payables	24	426	401
<b>Current liabilities</b>		<b>2,464</b>	<b>2,122</b>
<b>Liabilities</b>		<b>5,120</b>	<b>4,530</b>
<b>Equity and liabilities</b>		<b>7,194</b>	<b>6,455</b>

## Consolidated statement of changes in equity

<i>DKK million</i>	Share capital	Reserves	Retained earnings	Total	Non-controlling interest	Total equity
<b>Equity at January 1, 2015</b>	<b>376</b>	<b>778</b>	<b>677</b>	<b>1,831</b>	<b>94</b>	<b>1,925</b>
Net profit	0	0	354	354	-32	322
Other comprehensive income	0	76	-8	68	9	77
<b>Comprehensive income</b>	<b>0</b>	<b>76</b>	<b>346</b>	<b>422</b>	<b>-23</b>	<b>399</b>
Dividend	0	0	-250	-250	0	-250
<b>Transactions with owners</b>	<b>0</b>	<b>0</b>	<b>-250</b>	<b>-250</b>	<b>0</b>	<b>-250</b>
<b>Equity at December 31, 2015</b>	<b>376</b>	<b>854</b>	<b>773</b>	<b>2,003</b>	<b>71</b>	<b>2,074</b>

<i>DKK million</i>	Share capital	Reserves	Retained earnings	Total	Non-controlling interest	Total equity
<b>Equity at January 1, 2014</b>	<b>376</b>	<b>719</b>	<b>549</b>	<b>1,644</b>	<b>0</b>	<b>1,644</b>
Net profit	0	0	444	444	-4	440
Other comprehensive income	0	59	-16	43	0	43
<b>Comprehensive income</b>	<b>0</b>	<b>59</b>	<b>428</b>	<b>487</b>	<b>-4</b>	<b>483</b>
Non-controlling interest	0	0	0	0	98	98
Dividend	0	0	-300	-300	0	-300
<b>Transactions with owners</b>	<b>0</b>	<b>0</b>	<b>-300</b>	<b>-300</b>	<b>98</b>	<b>-202</b>
<b>Equity at December 31, 2014</b>	<b>376</b>	<b>778</b>	<b>677</b>	<b>1,831</b>	<b>94</b>	<b>1,925</b>

## Consolidated cash flow statement

<i>DKK million</i>	Note	2015	2014
Net profit		322	440
Adjustments for non-cash items	33	457	456
Change in working capital	34	146	-6
<b>Cash flows from operating activities before financial items and tax</b>		<b>925</b>	<b>890</b>
Interest received, etc.		119	70
Interest paid, etc.		-153	-109
<b>Cash flows from ordinary activities</b>		<b>891</b>	<b>851</b>
Corporation tax paid		-141	-97
<b>Cash flows from operating activities</b>		<b>750</b>	<b>754</b>
Purchase of intangible assets		-66	-28
Purchase of property, plant and equipment		-589	-600
Sale of property, plant and equipment		32	0
Purchase of fixed asset investments		-47	-16
Sale of fixed asset investments		5	5
Dividend received		27	54
<b>Cash flows from investing activities</b>		<b>-638</b>	<b>-585</b>
Raising of non-current loans		400	186
Repayment of non-current loans		-249	-205
Non-controlling interest's payment of share capital		0	97
Dividend paid		-250	-300
<b>Cash flows from financing activities</b>		<b>-99</b>	<b>-222</b>
<b>Change in cash and cash equivalents</b>		<b>13</b>	<b>-53</b>
Cash and cash equivalents at January 1		920	934
Foreign currency translation adjustments		19	39
<b>Cash and cash equivalents at December 31</b>		<b>952</b>	<b>920</b>
Cash		577	453
Deposits with the parent company		375	467
<b>Cash and cash equivalents at December 31</b>		<b>952</b>	<b>920</b>

# Notes to the consolidated financial statements

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# Notes to the consolidated financial statements

## Note 1

### Accounting policies

#### Basis of preparation

The consolidated financial statements of Haldor Topsoe A/S have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, as well as additional Danish disclosure requirements applying to large enterprises of reporting class C.

The accounting policies are unchanged from last year.

#### New standards, amendments and interpretations adopted by Haldor Topsoe

The following standards have been applied by Haldor Topsoe for the financial year 2015:

- > Annual improvements to IFRS (2010-2012). These annual improvements include a number of minor changes to IFRS:
  - a IFRS 3: Clarifies that an obligation to pay contingent consideration which meets the definition of a financial instrument is classified as a financial liability or as equity on the basis of the definitions in IAS 32.
  - b IFRS 13: Clarifies that the standard did not intend to remove the ability to measure short-term receivables and payables at invoice amounts in such cases.
  - c IAS 16 and IAS 38: Clarify how the gross carrying amount and the accumulated depreciation are treated where an entity uses the revaluation model. The carrying amount of the asset is restated to the revalued amount.
  - d IAS 24: The standard is amended to include, as a related party, an entity that provides key management personnel services to the reporting entity or to the parent of the reporting entity (the management entity). The reporting entity is not required to disclose the compensation paid by the management entity to the management entity's employees or directors, but it is required to disclose the amounts charged to the reporting entity by the management entity for services provided.
- > Annual improvements to IFRSs (2011-2013). These annual improvements

include a number of minor changes to IFRS:

- a IFRS 3: Clarifies that IFRS 3 does not apply to the accounting for the formation of any joint arrangement under IFRS 11.
  - b IFRS 13: Clarifies that the portfolio exception in IFRS 13, which allows an entity to measure the fair value of a group of financial assets and financial liabilities on a net basis, applies to all contracts (including non-financial contracts) within the scope of IAS 39 or IFRS 9.
- > Amendments to IAS 19: The change regards employee contributions for defined benefit plans.

Haldor Topsoe has assessed that the new standards and amendments to standards and interpretations effective for annual periods beginning after January 1, 2015, do not have any significant impact on the consolidated financial statements of Haldor Topsoe.

#### New standards, amendments and interpretations not yet effective

A number of new standards and amendments to standards and interpretations have been adopted by IASB and endorsed by the EU. These standards are not yet effective and will be applied when they become effective for Haldor Topsoe:

- > Amendments to IAS 1: The key changes are materiality, disaggregation and sub-totals, notes and disclosure of accounting policies etc.
- > Annual improvements to IFRS (2012-2014): These annual improvements include a number of minor changes to IFRS:
  - a IFRS 5: Clarifies that when an asset (or disposal group) is reclassified from 'held for sale' to 'held for distribution', or vice versa, this does not constitute a change to a plan of sale or distribution, and does not have to be accounted for as such.
  - b IFRS 7 "Financial instruments: Disclosures": There are two amendments to IFRS 7 regarding servicing contracts and interim financial statements.
  - c IAS 19: Clarifies that, when determining the discount rate for post-employment benefit obligations, it is the currency that the liabilities are denominated in that is important, and

not the country where they arise, e.g. EUR.

- > Amendments to IAS 16/IAS 38: Clarification of acceptable methods of depreciation and amortization.
- > Amendments to IFRS 11: Accounting for acquisitions of interests in joint operations.

None of the above are expected to have a significant impact on the consolidated financial statements of Haldor Topsoe.

IASB has issued the following amendments or interpretations that are relevant to Haldor Topsoe, but have not yet been endorsed by the EU:

- > IFRS 9 "Financial instruments.": The standard replaces IAS 39 Financial instruments: Recognition and Measurement. It has three classification categories for debt instruments: amortized cost, fair value through other comprehensive income ('FVOCI') and fair value through profit or loss ('FVPL'). Classification under IFRS 9 for debt instruments is driven by the entity's business model for managing the financial assets and whether the contractual cash flows represent solely payments of principal and interest ('SPPI'). Equity investments which do not form part of the trading portfolio can be irrevocably designated at fair value through other comprehensive income. Further, a new impairment model, based on expected losses, has been introduced for debt instruments not measured at fair value through profit or loss. A new hedge accounting model has also been introduced under which the qualifying criteria are adjusted so as to better align with risk management practices.
- > IFRS 15 "Revenue from contracts with customers" - including amendments to IFRS 15: Effective date of IFRS 15. The IASB has issued a new standard for the recognition of revenue. This will replace IAS 18, which covers contracts for goods and services, and IAS 11, which covers construction contracts. The new standard is based on the principle that revenue is recognized when control of goods or services transfer to a customer - so the notion of control replaces the existing notion of risks and rewards. The principle is applied to each individual performance obligation identified in the contract. The Group

# Notes to the consolidated financial statements

## Note 1

### Accounting policies (continued)

is currently analyzing the effect of the standard, which cannot be estimated yet.

- > IFRS 16 "Leasing": IASB has issued a new standard for the recognition of leasing contracts. This will replace IAS 17. The new standard requires that operational leases should be recognized in the balance sheet as an asset and a leasing obligation. The Group is currently analyzing the effect of the standard, which cannot be estimated yet.
- > Amendments to IFRS 10, IFRS 12 and IAS 28: Applying the consolidation exception for these entities.
- > Amendments to IFRS 10/IAS 28: Sale or contribution of assets between an investor and its associate or joint venture.

The above standards and interpretations will be applied when they become effective. None of these are expected to have a significant impact on the consolidated financial statements of Haldor Topsoe, except potential impact of IFRS 15 "Revenue from contracts with customers" and IFRS 16 "Leasing".

### General

The consolidated financial statements have been prepared in accordance with the historical cost convention, except for the following items that are stated at fair value:

- > Land and buildings
- > Financial assets available-for-sale
- > Derivative financial instruments

Part of the information required by IFRS appears from Management's Review. The remaining information appears from the following sections.

### Consolidation

The consolidated financial statements comprise the parent company, Haldor Topsoe A/S, and enterprises in which the parent company directly or indirectly holds the majority of the voting rights or in which the parent company through share ownership or otherwise exercises control.

Consolidation is performed by summarizing the financial statements of the parent company and group enterprises, which

have been prepared in accordance with the Group's accounting policies.

On consolidation, elimination is made of intercompany income and expenses, shareholdings, dividends and accounts as well as of realized and unrealized profits and losses on transactions between the consolidated enterprises.

The parent company's investments in consolidated group enterprises are set off against the parent company's share of the net asset value of group enterprises at the time of consolidation.

The non-controlling interest's share of profit for the year and of equity in subsidiaries which are not wholly owned is included as part of the Group's profit and equity, respectively, but shown as separate items.

### Functional and presentation currency

Items in the financial statements of each of the Group's enterprises are presented in the currency used in the primary economic environment in which the enterprise operates. The consolidated financial statements are presented in Danish kroner (DKK), which is the functional and presentation currency of the parent company.

### Translation policies

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the date of transaction. Foreign currency monetary items are translated into the functional currency at the exchange rates prevailing at the balance sheet date.

Financial statements of group enterprises with another functional currency than Danish kroner are translated into Danish kroner using the exchange rates prevailing at the balance sheet date for balance sheet items and average exchange rates for income statement items.

Realized and unrealized foreign exchange gains and losses are recognized in financial income and financial expenses, except for unrealized losses and gains arising from hedging of future cash flows, which are recognized in equity under reserve for value adjustment of hedging instruments. In addition, the following currency translation differences are recognized directly in

equity under the foreign currency translation reserve, using the exchange rates prevailing at the balance sheet date:

- > Translation of group enterprises' net assets at the beginning of the financial year.
- > Translation of group enterprises' income statements from average exchange rates to the exchange rates prevailing at the balance sheet date.
- > Translation of non-current intercompany balances that are considered an addition to the net investment in group enterprises.

### Derivative financial instruments

Derivative financial instruments are initially recognized in the balance sheet at cost and are subsequently remeasured at their fair values. Positive and negative fair values of derivative financial instruments are recognized in "Other receivables" and "Other payables".

Changes in the fair values of derivative financial instruments that qualify as hedges of expected future cash flow are recognized directly in equity. Amounts recognized in equity are transferred to the income statement in the period when the hedged item affects the income statement.

Changes in the fair values of derivative financial instruments that do not qualify as hedges are recognized in the income statement. The fair values of derivative financial instruments are determined based on prices obtained from stock exchanges or other reliable data sources.

### Income statement Revenue

Revenue from the sale of finished goods is recognized in the income statement when delivery and transfer of risk have been made before year-end and when the income can be measured reliably and is expected to be received. Revenue is recognized exclusive of VAT and net of discounts relating to sales.

Contract work in progress is recognized based on the stage of completion, which means that revenue equals the selling price of the work completed for the year (percentage-of-completion method). This method is applied when total revenue

# Notes to the consolidated financial statements

## Note 1 Accounting policies (continued)

and expenses in respect of the contract and the stage of completion at the balance sheet date can be measured reliably, and it is probable that economic benefits, including payments, will flow to the Group.

### Other operating income

Other operating income comprises income of a secondary nature to the Group's core activities, including government grants provided for research projects.

### Other external expenses

Other external expenses comprise expenses for premises, sales and distribution as well as office expenses, etc.

### Government grants

Government grants received for research and development projects are recognized in "Other operating income" as the projects progress. Grants received for investment in property, plant and equipment are set off against the related property, plant and equipment, if directly related. Otherwise grants are recognized as deferred income and systematically recognized in "Other external expenses" over the useful life of the asset.

### Leases

Rental expenses are recognized in the income statement on a straight-line basis over the lease term. The liability related

to non-cancellable leases is disclosed in the notes.

### Tax

Tax consists of current tax for the year, deferred tax as well as any adjustments to prior years. Tax attributable to the profit for the year is recognized in the income statement, whereas tax attributable to equity transactions is recognized directly in equity.

Haldor Topsoe A/S and Danish group enterprises are jointly taxed. Tax for the individual companies is allocated fully on the basis of expected taxable income.

### Balance sheet Intangible assets

#### Development projects

Development projects that are clearly defined and identifiable and in respect of which technical feasibility, sufficient resources and a potential future market or development opportunity in the enterprise can be demonstrated, and where it is the intention to manufacture, market or use the project, are recognized as intangible assets. This applies if sufficient certainty exists that the value in use of future earnings can cover the cost of sales and distribution involved as well as the development costs.

Development projects that do not meet the Group's criteria for recognition in the balance sheet and research expenses are

recognized as expenses in the income statement as incurred.

### Other intangible assets

Rights and patents are measured at cost less accumulated amortization and impairment losses. Both rights and patents are amortized on a straight-line basis over the remaining patent term, but not exceeding 10 years, due to the notoriously fast development in applied technologies and related uncertainty about longer amortization period.

Internally developed software for major projects is measured at cost less accumulated amortization and impairment losses. Software is amortized on a straight-line basis over 4 years.

Other intangible assets are tested for impairment when there is an indication of impairment. Material impairment indicators which may lead to an impairment test are similar to those stated in the section on property, plant and equipment.

Impairment losses relating to other intangible assets are reversed if the recoverable amount subsequently increases.

Gains or losses from divestment of intangible assets are recognized in the income statement under "Other external expenses".

### Property, plant and equipment

Property, plant and equipment are measured at cost less accumulated depreciation and impairment losses. Land and buildings are measured using the revaluation model at cost with the addition of revaluations less accumulated depreciation and impairment losses. Property, plant and equipment under construction are measured at cost.

Cost comprises the cost of acquisition and expenses directly related to the acquisition up until the time when the asset is ready for use as well as costs of restoration to the extent that a provision is recognized at the same time.

In the case of assets of own construction, cost comprises direct and indirect expenses for labor, materials, components and sub-suppliers. Borrowing costs related to construction of major property,

## The key figures and financial ratios have been calculated as follows:

<b>Gross margin</b>	=	$\frac{\text{Gross profit} \times 100}{\text{Revenue}}$
<b>EBITDA margin</b>	=	$\frac{\text{EBIT} + \text{depreciation, amortization etc.} \times 100}{\text{Revenue}}$
<b>EBIT margin</b>	=	$\frac{\text{EBIT} \times 100}{\text{Revenue}}$
<b>Return on invested capital</b>	=	$\frac{\text{EBIT} \times 100}{\text{Average invested capital}}$
<b>Equity ratio</b>	=	$\frac{\text{Equity at year-end} \times 100}{\text{Total assets}}$
<b>Return on equity</b>	=	$\frac{\text{Net profit} \times 100}{\text{Average equity}}$

# Notes to the consolidated financial statements

## Note 1

### Accounting policies (continued)

plant and equipment are recognized in cost over the period of construction.

Revaluations of land and buildings are performed on the basis of management's estimate of fair value which is based on an independent valuation. Revaluations less deferred taxes are transferred to the revaluation reserve under equity.

Property, plant and equipment are divided into sub-assets if the future useful life of the individual assets is different.

Depreciation based on cost and revaluations reduced by any residual value is calculated on a straight-line basis over the expected useful lives of the assets, which are:

Buildings	13–40 years
Plant and machinery	5–10 years
Other fixtures and equipment	4–20 years
Land is not depreciated.	

The residual value and useful lives of the assets are assessed annually and adjusted if necessary at the balance sheet date.

Property, plant and equipment are tested for impairment when there is an indication of impairment. Impairment indicators comprise e.g.:

- > Reduced earnings compared to expected future results.
- > Material negative development trends in the sector or the economy in the enterprise's markets
- > Damage to the asset or changed use of the asset.

Impairment losses relating to property, plant and equipment are reversed if the recoverable amount subsequently increases.

Gains and losses from sale of property, plant and equipment are recognized in the income statement under "Other external expenses".

### Investment in joint venture

Investment in joint venture is recognized and measured under the equity method.

The item "Result of investment in joint ventures" in the income statement includes the proportionate share of the result after tax.

### Other securities and investments

Investments are measured at fair value at the balance sheet date.

Unrealized fair value adjustments are recognized directly in equity under the "Reserve for value adjustment of financial assets" available-for-sale. On realization, value adjustments are transferred from equity to the income statement. Impairment losses are recognized in the income statement.

Securities in the form of loans are measured in the balance sheet at the lower of amortized cost and net realizable value, which corresponds to nominal value less provision for bad and doubtful debts.

### Inventories

Inventories are measured at cost under the FIFO method. Cost is determined using a standard cost method that includes direct and indirect production costs. Direct production costs comprise raw materials, consumables and direct labor costs, whereas indirect production costs comprise indirect materials and labor costs, maintenance and depreciation of machinery, production buildings and equipment used in the production process as well as the cost of plant administration and management.

Inventories are written down to net realizable value if this is lower than cost. The net realizable value is calculated as the total of future revenue expected to be generated in the process of normal operations and determined by allowing for marketability, obsolescence and development in expected selling price less selling expenses.

### Receivables

Receivables are measured in the balance sheet at the lower of amortized cost and net realizable value, which corresponds to nominal value less provisions for bad debts. Provisions for bad debts are determined on the basis of an individual assessment of each receivable.

### Contract work in progress

Contract work in progress is measured at the selling price of the work completed calculated on the basis of the stage of completion. The stage of completion is determined on the basis of the share of contract costs incurred compared to the total expected contract costs. Where it is probable that total contract expenses will exceed the total revenue from a contract, the expected loss is recognized as an expense in the income statement.

Where the selling price cannot be measured reliably, the selling price is measured at the lower of expenses incurred and net realizable value.

Prepayments are set off against contract work in progress. Received payments on account exceeding the performed share of contracts are determined separately for each contract and recognized in "Contract work in progress" under current liabilities.

Expenses relating to sales work and the winning of contracts are recognized in the income statement as incurred.

### Reserves

The revaluation reserve includes a reserve for revaluation of land and buildings.

The foreign currency translation reserve comprises all translation adjustments arising from the translation of financial statements of group enterprises with another functional currency than Danish kroner as well as translation adjustments concerning non-current intercompany balances that are considered an addition to the net investment in such enterprises.

Reserve for unpaid share capital comprises the deviation between the amount by which the share capital has been increased and the amount paid.

Reserve for value adjustment of hedging instruments comprises the accumulated net change in the fair value of hedging transactions which meet the criteria of future cash flow hedges and where the hedged transaction has not yet been completed.

Reserve for value adjustment of financial assets available-for-sale comprises the accumulated net change in the fair value of financial assets classified as financial



# Notes to the consolidated financial statements

## Note 1

### Accounting policies (continued)

assets available-for-sale. The reserve is dissolved as the financial assets in question have been sold.

### Dividend

Proposed dividend for the financial year is recognized in "Retained earnings".

### Pension obligations and similar obligations

The costs of defined contribution plans are recognized in the income statement in the financial year to which they relate.

The costs and liabilities of defined benefit plans are determined in accordance with the projected unit credit method. The liability is calculated annually by an actuary. Actuarial gains and losses are recognized in full in "Equity". Plan assets are only recognized to the extent that the Group is able to derive future economic benefits such as refunds from the plan or reductions of future contributions.

Costs related to other non-current staff benefits are accrued over the employees' expected average working life.

### Deferred tax

Deferred income tax is measured using the balance sheet liability method in respect of temporary differences arising between the tax bases of assets and liabilities. The tax base of tax loss carry-forwards is deducted from deferred tax when it is probable that the losses may be utilized. Deferred tax is measured on the basis of the tax rules and tax rates expected to be in force on elimination of temporary differences. Any changes in deferred tax due to changes in tax rates are recognized in the income statement with the share attributable to the results for the year and directly in equity with the share attributable to equity transactions.

### Provisions

Provisions are recognized when – in consequence of a previous event – the Group has a legal or constructive obligation and it is probable that economic benefits must be given up to settle the obligation. Provisions are measured at management's estimate of the discounted amount expected to be required to repay the obligation.

### Financial liabilities

Loans such as bonds, mortgage loans and loans from credit institutions which are expected to be held to maturity are recognized initially at the proceeds received net of transaction expenses incurred. Subsequently, the loans are measured at amortized cost, corresponding to capitalized value, using the effective interest rate; the difference between the proceeds and the nominal value is recognized in the income statement over the loan period. Other debts are measured at amortized cost, mainly corresponding to nominal value.

### Deferred income

Deferred income comprises payments received in respect of income in subsequent years and is primarily related to government grants.

### Other areas

#### Financial highlights

The financial ratios have been prepared in accordance with the Danish Society of Financial Analysts' "Recommendations and Financial Ratios 2010".

#### Key accounting estimates and judgements

In accordance with general accounting policies, determination of the carrying amount of certain assets and liabilities requires assessments and estimates of future events. Assessments and estimates are performed based on historical experience and other factors which management considers reasonable under the circumstances. These assumptions may be incomplete or inaccurate and unexpected issues may arise, which implies that the assessments and estimates made are subject to some uncertainty.

#### Properties

The Group's properties are measured in accordance with the revaluation model. Fair value is determined on the basis of a market based estimate performed by an independent, qualified valuation expert. The frequency of an independent valuation depends on the extent to which management assesses that the market development shows signs of significant difference between the carrying amount and fair value.

### Other investments

Other investments are measured at fair value at the balance sheet date. To the extent that fair value cannot be derived from an active market, it is required that management assesses and selects an appropriate method for determination of the fair value. In this case, the fair value is measured at the discounted value of expected future cash flows. Material assumptions comprise expected future cash flows, discount rates and growth rates for the period.

### Inventory

The standard cost calculations are reviewed on a regular basis to ensure that all relevant assumptions such as prices, output and capacity utilization are incorporated correctly. Changes in the calculation method used to calculate indirect production costs may impact the gross margin and the overall measurement of inventories.

Inventories are written down to net realizable value if this is lower than cost. The need to write down inventories is primarily assessed based on negotiability and production quality.

### Technology revenue

In management's opinion, the Group's sale of technology is to a high degree individually adjusted, and contract work in progress is consequently measured at the selling price of the work completed based on the stage of completion. The stage of completion is determined on the basis of the share of contract costs incurred compared to the total expected contract costs. These costs are partly based on an estimate which to a high degree is based on historical experience.

### Research and development costs

Research costs are expensed when incurred. Development costs which do not meet the requirements of capitalization are expensed when incurred. Management assesses whether the capitalization requirements are met based on expectations of the technical possibility of completing the development project, expectations of the existence of a market for the product, etc.

# Notes to the consolidated financial statements

## Note 2

### Revenue

The Group's activities are in the business segment of providing catalytic processes for integrated solutions to industrial plants. The provision of these integrated solutions comprises fundamental and applied research, reaction engineering, process engineering, mechanical design and production and supply of catalysts. The Group's revenue can be specified as follows:

<i>DKK million</i>	<b>2015</b>	<b>2014</b>
Sale of products	5,094	4,964
Sale of services	691	721
<b>Total revenue</b>	<b>5,785</b>	<b>5,685</b>

Of the total revenue, 25% (2014: 25%) derives from North America and 75% (2014: 75%) from the rest of the world.

Of the total revenue, 25% (2014: 25%) derives from engineering projects.

Government grants for research and development amounting to DKK 13 million (2014: DKK 49 million) have been recognized in the income statement.

## Note 3

### Staff expenses

<i>DKK million</i>	<b>2015</b>	<b>2014</b>
Wages and salaries	1,423	1,348
Pensions – defined contribution plans	144	140
Pensions – defined benefit plans	11	9
Other social security contributions	166	143
<b>Total</b>	<b>1,744</b>	<b>1,640</b>

Capitalization of work performed on property, plant and equipment	-56	-27
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<b>Total staff expenses</b>	<b>1,688</b>	<b>1,613</b>
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Executive Committee salary	24	22
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Executive Committee pension	3	3
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Fee to Board of Directors	4	4
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<b>Total remuneration to Executive Committee and Board of Directors</b>	<b>31</b>	<b>29</b>
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The comparative figures for 2014 have been changed to reflect the staff expenses of Executive Committee.

The Executive Committee consists of Executive Management and key employees.

Average number of employees	2,688	2,694
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Of which in Denmark	1,985	2,049
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# Notes to the consolidated financial statements

## Note 4

### Depreciation, amortization and impairment losses

<i>DKK million</i>	2015	2014
Rights	1	0
Patents	7	21
Software	17	15
Land and buildings	24	112
Plant and machinery	151	113
Other fixtures and equipment	93	105
<b>Total depreciation, amortization and impairment losses</b>	<b>293</b>	<b>366</b>

Impairment cost of DKK 123 million relating to the closure of Topsoe Fuel Cell A/S is included in the figures for 2014.

## Note 5

### Result of investment in joint venture

<i>DKK million</i>	2015	2014
Share of result of joint venture	-9	0
<b>Total result of investment in joint venture</b>	<b>-9</b>	<b>0</b>

## Note 6

### Financial income

<i>DKK million</i>	2015	2014
Income from other investments	27	54
Interest received from the parent company	7	18
Interest income	11	1
Gains on derivative financial instruments (currency)	3	4
Foreign currency translation adjustment	96	45
Other financial income	2	2
<b>Total financial income</b>	<b>146</b>	<b>124</b>

## Note 7

### Financial expenses

<i>DKK million</i>	2015	2014
Interest expenses	56	59
Loss on derivative financial instruments (interest)	4	9
Loss on derivative financial instruments (currency)	22	11
Foreign currency translation adjustment	94	27
Other financial expenses	1	4
<b>Total financial expenses</b>	<b>177</b>	<b>110</b>

## Notes to the consolidated financial statements

### Note 8

#### Tax

<i>DKK million</i>	2015	2014
Current tax for the year	88	101
Change in deferred tax for the year	80	63
Change in corporate tax rate	-34	-30
Adjustments to prior years	6	3
<b>Total tax</b>	<b>140</b>	<b>137</b>
%	2015	2014
Danish corporation tax rate	23.5	24.5
Non-deductible expenses	1.0	0.2
Income not subject to tax	0.0	-0.5
Differences in foreign tax rates	10.4	4.3
Adjustments relating to prior years	1.5	0.6
Change in corporate tax rate	-7.3	-5.5
Other adjustments	1.2	0.2
<b>Effective tax rate</b>	<b>30.3</b>	<b>23.8</b>

# Notes to the consolidated financial statements

## Note 9

### Intangible assets

<i>DKK million</i>	<b>Rights</b>	<b>Patents</b>	<b>Software</b>	<b>Intangible assets under construction</b>
Cost at January 1, 2015	0	97	139	8
Additions during the year	25	14	22	5
Disposals during the year	0	-7	-1	0
Transfers during the year	0	0	11	-11
<b>Cost at December 31, 2015</b>	<b>25</b>	<b>104</b>	<b>171</b>	<b>2</b>
Amortization and impairment losses at January 1, 2015	0	62	107	0
Amortization for the year	1	7	17	0
Reversal of amortization and impairment losses on assets sold	0	-5	-2	0
<b>Amortization and impairment losses at December 31, 2015</b>	<b>1</b>	<b>64</b>	<b>122</b>	<b>0</b>
<b>Carrying amount at December 31, 2015</b>	<b>24</b>	<b>40</b>	<b>49</b>	<b>2</b>

Research and development costs expensed in 2015 558

<i>DKK million</i>	<b>Patents</b>	<b>Software</b>	<b>Intangible assets under construction</b>
Cost at January 1, 2014	110	129	4
Additions during the year	14	5	9
Disposals during the year	-27	0	0
Transfers during the year	0	5	-5
<b>Cost at December 31, 2014</b>	<b>97</b>	<b>139</b>	<b>8</b>
Amortization and impairment losses at January 1, 2014	66	92	0
Amortization for the year	9	14	0
Impairment losses for the year	12	1	0
Reversal of amortization and impairment losses on assets sold	-25	0	0
<b>Amortization and impairment losses at December 31, 2014</b>	<b>62</b>	<b>107</b>	<b>0</b>
<b>Carrying amount at December 31, 2014</b>	<b>35</b>	<b>32</b>	<b>8</b>

Research and development costs expensed in 2014 605

Impairment loss for 2014 relates to the closure of Topsoe Fuel Cell A/S.

## Notes to the consolidated financial statements

### Note 10

#### Property, plant and equipment

<i>DKK million</i>	Land and buildings	Plant and machinery	Other fixtures and equipment	Property, plant and equipment under construction
Cost at January 1, 2015	991	2,757	867	457
Foreign currency translation adjustment	16	88	4	16
Additions during the year	18	55	83	433
Disposals during the year	-50	-4	-34	0
Transfers during the year	87	252	27	-366
<b>Cost at December 31, 2015</b>	<b>1,062</b>	<b>3,148</b>	<b>947</b>	<b>540</b>
Revaluation at January 1, 2015	325	8	0	0
Foreign currency translation adjustment	14	0	0	0
<b>Revaluation at December 31, 2015</b>	<b>339</b>	<b>8</b>	<b>0</b>	<b>0</b>
Depreciation and impairment losses at January 1, 2015	611	1,824	605	0
Foreign currency translation adjustment	10	63	2	0
Depreciation for the year	24	151	93	0
Reversal of depreciation and impairment losses on assets sold and scrapped	-20	-1	-32	0
<b>Depreciation and impairment losses at December 31, 2015</b>	<b>625</b>	<b>2,037</b>	<b>668</b>	<b>0</b>
<b>Carrying amount at December 31, 2015</b>	<b>776</b>	<b>1,119</b>	<b>279</b>	<b>540</b>
Carrying amount at December 31, 2015, under the depreciated cost model	491	1,119	279	540
Borrowing costs capitalized in 2015				2

Where Management assesses that a revaluation is material, the properties in question have been revalued by an independent assessor in connection with year end closing.

## Notes to the consolidated financial statements

### Note 10

#### Property, plant and equipment (continued)

<i>DKK million</i>	Land and buildings	Plant and machinery	Other fixtures and equipment	Property, plant and equipment under construction
Cost at January 1, 2014	938	2,178	726	715
Foreign currency translation adjustment	16	80	4	21
Additions during the year	6	116	63	415
Disposals during the year	-29	-143	-34	0
Transfers during the year	60	526	108	-694
<b>Cost at December 31, 2014</b>	<b>991</b>	<b>2,757</b>	<b>867</b>	<b>457</b>
Revaluation at January 1, 2014	310	8	0	0
Foreign currency translation adjustment	15	0	0	0
<b>Revaluation at December 31, 2014</b>	<b>325</b>	<b>8</b>	<b>0</b>	<b>0</b>
Depreciation and impairment losses at January 1, 2014	510	1,775	523	0
Foreign currency translation adjustment	13	76	4	0
Depreciation for the year	35	111	75	0
Impairment losses for the year	77	2	30	0
Reversal of depreciation and impairment losses on assets sold and scrapped	-24	-140	-27	0
<b>Depreciation and impairment losses at December 31, 2014</b>	<b>611</b>	<b>1,824</b>	<b>605</b>	<b>0</b>
<b>Carrying amount at December 31, 2014</b>	<b>705</b>	<b>941</b>	<b>262</b>	<b>457</b>
Carrying amount at December 31, 2014, under the depreciated cost model	523	941	262	457
Borrowing costs capitalized in 2014				0

Impairment loss for 2014 relates to the closure of Topsoe Fuel Cell A/S.

# Notes to the consolidated financial statements

## Note 10

### Property, plant and equipment (continued)

<i>DKK million</i>	Level 1	Level 2	Level 3
Office buildings in Denmark	0	0	233
Production plants in Denmark, US and China	0	0	470
Excess land in US	0	73	0
<b>Distribution of assets stated at fair value at December 31, 2015</b>	<b>0</b>	<b>73</b>	<b>703</b>

<i>DKK million</i>	Level 1	Level 2	Level 3
Office buildings in Denmark	0	0	286
Production plants in Denmark and US	0	0	354
Excess land in US	0	65	0
<b>Distribution of assets stated at fair value at December 31, 2014</b>	<b>0</b>	<b>65</b>	<b>640</b>

Level 1: Quoted prices (unadjusted) in an active market for identical assets.

Level 2: Input other than quoted prices included within level 1 that is observable for asset, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3: Input for assets that are not based on observable market data (i.e. unobservable inputs).

There have been no transfers between levels 1 and 2 during the year.

The fair value of office buildings in Denmark has been derived using a market approach primarily based on rental per m2 for comparable buildings and an interest rate. The rental per m2 is set at DKK 700-1000 for office buildings and DKK 500-725 for storage and laboratories. The fair value of production plants has been derived using a cost approach, which reflects the cost of constructing similar buildings at an equivalent age and use. Excess land in US is valued using a sales comparison approach. Sales prices of comparable land in close proximity are adjusted for differences in key attributes such as property size. The sales price per acre is set at USD 105,000.

The current use of land and buildings is considered to represent the highest and best use of the assets.

The valuation methods have not changed from last year.

<i>DKK million</i>	2015	2014
Fair value of level 3 assets at January 1	640	680
Additions	105	65
Disposals	-30	-4
Included in the income statement as depreciation	-24	-112
Foreign currency translation adjustment	12	11
<b>Fair value of level 3 assets at December 31</b>	<b>703</b>	<b>640</b>



# Notes to the consolidated financial statements

## Note 11 Investments

<i>DKK million</i>	Investment in joint venture	Other securities and investments	Other receivables
Cost at January 1, 2015	0	132	59
Foreign currency translation adjustment	0	1	2
Additions during the year	39	0	16
Disposals during the year	0	0	-5
<b>Cost at December 31, 2015</b>	<b>39</b>	<b>133</b>	<b>72</b>
Value adjustment at January 1, 2015	0	282	-17
Net result for the year	-9	0	0
Value adjustments for the year	0	-27	0
<b>Value adjustment at December 31, 2015</b>	<b>-9</b>	<b>255</b>	<b>-17</b>
<b>Carrying amount at December 31, 2015</b>	<b>30</b>	<b>388</b>	<b>55</b>

<i>DKK million</i>	Other securities and investments	Other receivables
Cost at January 1, 2014	123	55
Foreign currency translation adjustment	0	2
Additions during the year	9	7
Disposals during the year	0	-5
<b>Cost at December, 31 2014</b>	<b>132</b>	<b>59</b>
	NOTES	
Value adjustment at January 1, 2014	302	-17
Value adjustments for the year	-20	0
<b>Value adjustment at December 31, 2014</b>	<b>282</b>	<b>-17</b>
<b>Carrying amount at December 31, 2014</b>	<b>414</b>	<b>42</b>

# Notes to the consolidated financial statements

## Note 11

### Investments (continued)

#### Investment in joint venture is specified as follows:

##### Ferrostaal Topsoe Projects GmbH

In 2015, the Group invested in a joint venture together with Ferrostaal GmbH. The share capital of the joint venture is EUR 10 million of which the Group owns 50%. The investment is measured under the equity method.

#### Other securities and investments are specified as follows:

##### Karnaphuli Fertilizer Limited, Bangladesh (KAFCO)

The Group has a shareholding in KAFCO of nominally BDT 692 million, which equals 15.01% of the shares in KAFCO. The shares are measured at fair value based on a discounted cash flow calculation on the basis of the present budgets and forecasts of KAFCO. The calculation is moreover based on material assumptions in terms of growth rate and discount rate. The discount rate is determined based on management's estimate of general capital market conditions and the specific risk profile and has been determined at 12% after tax. The growth rate in the terminal period has by management been estimated at 0%. Both the discount rate and the growth rate corresponds to the 2014 rates. Based on these criteria, the KAFCO shares have been written down by DKK 28 million (2014: DKK 25 million).

##### Chambal Fertilizer and Chemical Ltd., India

The Group has an investment in Chambal Fertilizer and Chemicals Ltd., corresponding to 0.5% of the share capital. The investment is measured at fair value based on listed market value.

##### Fatima Fertilizer Co. Ltd., Pakistan

The Group has an investment in Fatima Fertilizer Co. Ltd., corresponding to 0.05% of the share capital. The investment is measured at fair value based on listed market value.

##### Faradion Ltd., United Kingdom

The Group has an investment in Faradion Ltd., corresponding to 19.07% of the share capital. The investment is measured at fair value based on market value.

## Note 12

### Inventories

<i>DKK million</i>	2015	2014
Raw materials and consumables	330	294
Work in progress	146	140
Finished goods	751	721
<b>Inventories at December 31</b>	<b>1,227</b>	<b>1,155</b>
Cost of sales for the year	2,331	2,386
Impairment losses for the year	107	92
Reversed impairment losses for the year	-39	-48

Reversal of impairment losses is attributable to disposal or reuse of impaired goods in the production.

## Notes to the consolidated financial statements

### Note 13

#### Trade receivables

<i>DKK million</i>	2015	2014
<b>Trade receivables, gross</b>	<b>1,236</b>	<b>878</b>
Provision for bad debts at January 1	-11	-13
Provision for bad debts for the year	-26	0
Reversal of bad debts, prior years	2	2
<b>Provision for bad debts at December 31</b>	<b>-35</b>	<b>-11</b>
<b>Trade receivables at December 31</b>	<b>1,201</b>	<b>867</b>
Realized losses for the year	2	3
Of this, due after more than 1 year	0	0
<i>Receivables, gross due at December 31 have the following aging in %:</i>	<b>2015</b>	<b>2014</b>
1-90 days	17	26
91-180 days	3	3
181+ days	5	5

### Note 14

#### Contract work in progress

<i>DKK million</i>	2015	2014
Selling price of work performed at the balance sheet date	5,189	5,157
Payments received on account	-6,159	-5,690
<b>Contract work in progress at December 31</b>	<b>-970</b>	<b>-533</b>
Contract work in progress recognized in assets	91	127
Contract work in progress recognized in liabilities	-1,061	-660
<b>Contract work in progress at December 31</b>	<b>-970</b>	<b>-533</b>

## Notes to the consolidated financial statements

### Note 15

#### Receivables from the parent company

<i>DKK million</i>	2015	2014
Deposit with the parent company	375	467
Unpaid share capital	241	241
Other receivables	1	42
<b>Receivables from the parent company at December 31</b>	<b>617</b>	<b>750</b>

Deposit with the parent company is part of a cash pooling arrangement.

### Note 16

#### Other receivables

<i>DKK million</i>	2015	2014
VAT and tax receivable	109	93
Fair value of derivative financial instruments	0	1
Dividends receivable	0	26
Government grants	2	8
Other receivables	33	39
<b>Other receivables at December 31</b>	<b>144</b>	<b>167</b>
Of this, due after more than 1 year	0	0

### Note 17

#### Share capital

<i>Number of shares</i>	2015	2014
<b>Shares of a nominal value of DKK 376,000,000</b>	<b>376,000</b>	<b>376,000</b>

The share capital consists of 376,000 shares with a nominal value of DKK 1,000 each. No shares carry any special right.

There has been no change in the share capital in 2015.

The following shareholder is recorded in the parent company's register of shareholders as holding at least 5% of the votes or at least 5% of the share capital:

Haldor Topsøe Holding A/S, Lyngby, Denmark

# Notes to the consolidated financial statements

## Note 18 Reserves

<i>DKK million</i>	Revaluation reserve	Foreign currency translation reserve	Reserve for unpaid share capital	Reserve for value adjustment of hedging instruments	Reserve for value adjustment of financial assets available-for-sale	Total
Reserves at January 1, 2015	222	47	241	-14	282	778
Foreign currency translation adjustment	0	88	0	0	0	88
Derivative financial instruments used for hedging of future cash flows	0	0	0	-11	0	-11
Realized derivative financial instruments transferred to financial gain/loss	0	0	0	23	0	23
Fair value adjustment of financial assets available-for-sale	0	0	0	0	-27	-27
Tax adjusted on revaluation of land and buildings	6	0	0	0	0	6
Tax	0	0	0	-3	0	-3
<b>Reserves attributed to the parent company at December 31, 2015</b>	<b>228</b>	<b>135</b>	<b>241</b>	<b>-5</b>	<b>255</b>	<b>854</b>
Non-controlling interest	0	9	0	0	0	9
<b>Total reserves at December 31, 2015</b>	<b>228</b>	<b>144</b>	<b>241</b>	<b>-5</b>	<b>255</b>	<b>863</b>

<i>DKK million</i>	Revaluation reserve	Foreign currency translation reserve	Reserve for unpaid share capital	Reserve for value adjustment of hedging instruments	Reserve for value adjustment of financial assets available-for-sale	Total
Reserves at January 1, 2014	222	-41	241	-6	303	719
Foreign currency translation adjustment	0	88	0	0	0	88
Derivative financial instruments used for hedging of future cash flows	0	0	0	-25	0	-25
Realized derivative financial instruments transferred to financial gain/loss	0	0	0	16	0	16
Fair value adjustment of financial assets available-for-sale	0	0	0	0	-20	-20
Tax	0	0	0	1	-1	0
<b>Reserves attributed to the parent company at December 31, 2014</b>	<b>222</b>	<b>47</b>	<b>241</b>	<b>-14</b>	<b>282</b>	<b>778</b>
Non-controlling interest	98	0	0	0	0	98
<b>Total reserves at December 31, 2014</b>	<b>320</b>	<b>47</b>	<b>241</b>	<b>-14</b>	<b>282</b>	<b>876</b>

# Notes to the consolidated financial statements

## Note 19

### Dividend

Proposed dividend constitutes DKK 150 million (2014: DKK 150 million) corresponding to DKK 398.94 (2014: DKK 398.94) per share.

Interim dividend of DKK 100 million for 2015 and dividend of DKK 150 million for 2014 have been paid during the year (2014: DKK 300 million) corresponding to DKK 664.89 (2014: DKK 797.87) per share.

#### Dividend policy

Since 2007 the Haldor Topsoe Group has financed the operations of Haldor Topsøe Holding A/S through dividend payments in order for this company to operate. The liquidity effect of the expected future dividend payments has been incorporated in the cash flow forecasts of Haldor Topsoe Group.

## Note 20

### Pension obligations and similar obligations

The Group has entered into pension plans with a considerable number of its employees. Most of the plans are defined contribution plans and only a small part is defined benefit plans.

#### Defined contribution plans

The Group finances the plans by currently paying a premium to independent insurance companies that are responsible for the pension obligations. Once the pension contributions to the defined contribution plans have been paid, the Group has no further pension obligations to current or terminated employees.

#### Defined benefit plans

The Group has made agreements with specific groups of employees regarding payment of certain benefits, including pension. These pensions relate to certain employees in the Group's US subsidiary where the plan partly consists of a basic pension and partly of an additional pension for selected members of management. The pension obligations are partly hedged through an independent fund. Actuarial valuation is performed annually.

<i>DKK million</i>	2015	2014
Pension costs	8	7
Interest expenses	11	11
Interest income on plan assets	-8	-9
<b>Total pension re. defined benefit recognized in staff expenses</b>	<b>11</b>	<b>9</b>

<i>Applied actuarial assumptions in %</i>	2015	2014
Discount rate	3.75	3.50
Future pay increases	3.00	4.00

A change in the discount rate of -0.5% or +0.5%, respectively, would impact the defined benefit obligation by +5% or -4%, respectively. A change in the future pay increase of -0.5% or +0.5%, respectively, would impact the defined benefit obligation by -2% or +2%, respectively.

The weighted average duration of the defined benefit obligation is 9 years (2014: 10 years).

# Notes to the consolidated financial statements

## Note 20

### Pension obligations and similar obligations (continued)

%	2015	2014
US	42	42
Developed countries	25	22
Emerging markets	2	3
<b>Shares</b>	<b>69</b>	<b>67</b>
US investment grade	11	11
High yield	12	12
Inflation protected	1	1
Other	1	1
<b>Bonds</b>	<b>25</b>	<b>25</b>
Real estate	3	3
Other	3	5
<b>Distribution of assets to cover the obligations at December 31</b>	<b>100</b>	<b>100</b>
<i>DKK million</i>	<b>2015</b>	<b>2014</b>
Present value of pension obligations	314	293
Fair value of pension plan assets	-224	-222
<b>Net obligation at December 31</b>	<b>90</b>	<b>71</b>
Present value of pension obligations at January 1	293	234
Foreign currency translation adjustment	34	31
Pension costs	8	7
Interest expenses	11	11
Actuarial gains and losses, demographic assumption	-9	11
Actuarial gains and losses, financial assumption	2	9
Pension paid	-25	-10
<b>Present value of pension obligations at December 31</b>	<b>314</b>	<b>293</b>
Fair value of pension plan assets at January 1	222	191
Foreign currency translation adjustment	26	25
Interest on pension assets	8	9
Return on plan assets excl. interest on pension assets	-16	-1
Paid by the company	9	8
Pension paid	-25	-10
<b>Fair value of pension plan assets at December 31</b>	<b>224</b>	<b>222</b>

Expected pension payments by the Group in 2016 amounts to DKK 23 million.

## Notes to the consolidated financial statements

### Note 21

#### Deferred tax

<i>DKK million</i>	2015	2014
Deferred tax at January 1	432	409
Foreign currency translation adjustment	2	0
Tax on equity items	-11	-6
Tax for the year	54	59
Tax previous years	-30	-30
<b>Deferred tax at December 31</b>	<b>447</b>	<b>432</b>
Intangible assets and property, plant and equipment	150	145
Inventories	1	-7
Work in progress	353	336
Provisions	-65	-59
Other	8	17
<b>Deferred tax at December 31</b>	<b>447</b>	<b>432</b>
Of this, due after more than 1 year	306	298

### Note 22

#### Provisions

<i>DKK million</i>	2015	2014
Provisions at January 1	196	208
Reversals during the year	-5	-22
Provisions for the year	15	10
<b>Provisions at December 31</b>	<b>206</b>	<b>196</b>
Warranty provision for catalysts and technology projects	201	191
Waste disposal	1	1
Other provisions	4	4
<b>Provisions at December 31</b>	<b>206</b>	<b>196</b>
Of this, due after more than 1 year	206	196



# Notes to the consolidated financial statements

## Note 23

### Non-current liabilities

<i>DKK million</i>	2015	2014
<b>Bonds</b>		
After 5 years	0	500
Between 1 and 5 years	996	496
<b>More than 1 year</b>	<b>996</b>	<b>996</b>
Less than 1 year	0	17
<b>Bonds at December 31</b>	<b>996</b>	<b>1,013</b>
<b>Mortgage debt</b>		
After 5 years	30	40
Between 1 and 5 years	41	41
<b>More than 1 year</b>	<b>71</b>	<b>81</b>
Less than 1 year	10	10
<b>Mortgage debt at December 31</b>	<b>81</b>	<b>91</b>
<b>Credit institutions</b>		
After 5 years	380	167
Between 1 and 5 years	450	450
<b>More than 1 year</b>	<b>830</b>	<b>617</b>
Less than 1 year	197	215
<b>Credit institutions at December 31</b>	<b>1,027</b>	<b>832</b>
<b>Deferred income</b>		
After 5 years	10	7
Between 1 and 5 years	1	1
<b>More than 1 year</b>	<b>11</b>	<b>8</b>
Less than 1 year	1	3
<b>Deferred income at December 31</b>	<b>12</b>	<b>11</b>

## Notes to the consolidated financial statements

### Note 24

#### Other payables

<i>DKK million</i>	2015	2014
Staff related items	222	239
Fair value of derivative financial instruments	11	20
Tax related items	5	7
Other payables	193	142
<b>Other payables at December 31</b>	<b>431</b>	<b>408</b>
More than 1 year	5	7
Less than 1 year	426	401
<b>Other payables at December 31</b>	<b>431</b>	<b>408</b>

### Note 25

#### Prepayments from customers

<i>DKK million</i>	2015	2014
Prepayments related to licence agreements	12	15
Prepayments related to sale of goods	345	422
<b>Prepayments from customers at December 31</b>	<b>357</b>	<b>437</b>

### Note 26

#### Assets provided as security

For the Group, non-current assets (land and buildings) with a carrying amount of DKK 432 million (2014: DKK 405 million) have been provided as security. The remaining balance of the loans secured by non-current assets as of December 31, 2015, was DKK 81 million for the Group (2014: DKK 91 million). Non-current assets are provided by means of real estate mortgage deeds and owners' mortgage deeds. The nominal value is DKK 111 million (2014: DKK 127 million) for the Group.

Furthermore, all assets of Haldor Topsoe Inc. have been provided as security for a loan amounting to DKK 115 million (2014: DKK 195 million).

Assets are provided as security for mortgage debt and other non-current loans. In case of other debt to the secured creditor, the asset(s) provided as security may - until release thereof - serve as security for any present or future obligation that the Group may have towards such parties.

# Notes to the consolidated financial statements

## Note 27

### Guarantees

The outstanding balance as of December 31, 2015, for guarantees given by banks and credit insurance institutions on the Group's behalf for contract work, etc. amounted to DKK 791 million (2014: DKK 620 million). Other guarantees given by banks on the Group's behalf amounted to DKK 96 million (2014: 242 million), being guarantees for non-current loans from the European Investment Bank. Total bank and insurance guarantees given on the Group's behalf amounted to DKK 887 million (2014: DKK 862 million).

The outstanding balance as of December 31, 2015, for bank guarantees received by the Group from suppliers for contract work etc. amounted to DKK 87 million (2014: DKK 98 million).

The outstanding balance as of December 31, 2015, for letters of credit issued in favor of the Group as security for payment under various supply contracts amounted to DKK 536 million (2014: DKK 468 million).

<i>DKK million</i>	<b>2015</b>	<b>2014</b>
Less than 1 year	617	579
Between 1 and 5 years	242	253
After 5 years	28	30
<b>Guarantees at December 31</b>	<b>887</b>	<b>862</b>

## Note 28

### Contractual obligations

<i>DKK million</i>	<b>2015</b>	<b>2014</b>
Less than 1 year	113	90
Between 1 and 5 years	217	268
After 5 years	468	501
<b>Contractual obligations at December 31</b>	<b>798</b>	<b>859</b>

Payments for the year recognized as operating lease expenses	94	77
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Leases and rental agreements relate mainly to premises and equipment, etc. and extend in some cases to 2032.

## Note 29

### Contingent liabilities

The Group's property in Frederikssund, Denmark, has been found to be contaminated. The Group has been ordered to prepare a proposal for remediation of the contamination. Management assesses that the remediation costs will not be significant.

# Notes to the consolidated financial statements

## Note 30

### Related parties

#### Control

Haldor Topsøe Holding A/S, Lyngby, Denmark - shareholder

<i>DKK million</i>	2015	2014
Management fee received from the parent company	1	1
Interest received from the parent company	7	18
Receivables from the parent company at December 31	617	750

#### *DKK million*

Related parties	Transactions	2015	2014
Joint venture	Administration fee	1	0
Joint venture	Outstanding	1	0
Former member of Board of Directors	Legal fee	0	1

Remuneration to Executive Committee and Board of Directors, please see note 3.

Intercompany transactions have been eliminated in the consolidated financial statements.

## Note 31

### Derivative financial instruments

<i>DKK million</i>	Contract amount 2015	Fair value 2015	Contract amount 2014	Fair value 2014
Sale of USD, matures in 2016	105	-1	0	0
Sale of USD, matures in 2015	0	0	86	-10
Sale of EUR, matures in 2015	0	0	24	0
<b>Forward exchange contracts at December 31</b>	<b>105</b>	<b>-1</b>	<b>110</b>	<b>-10</b>

The Group uses forward exchange contracts to hedge against changes in exchange rates in volatile currencies, especially USD, for contract related payments up to 12 months forward. The fair value of the contracts is recognized in the balance sheet through other comprehensive income. The Group thus applies the rules on hedge accounting.

<i>DKK million</i>	Contract amount 2015	Fair value 2015	Contract amount 2014	Fair value 2014
EUR interest rate swap, matures on December 31, 2021	48	-6	54	-8
USD interest rate swap, matures on March 31, 2015	0	0	149	-1
<b>Interest rate swaps at December 31</b>	<b>48</b>	<b>-6</b>	<b>203</b>	<b>-9</b>

The Group uses interest rate swaps to hedge against changes in interest rate levels and thus to reduce the interest rate risk. Interest rate swaps are used on floating rate loans. The fair value of the swaps is recognized in the balance sheet through other comprehensive income. The Group thus applies the rules on hedge accounting.

# Notes to the consolidated financial statements

## Note 31

### Derivative financial instruments (continued)

<i>DKK million</i>	Contract amount 2015	Fair value 2015	Contract amount 2014	Fair value 2014
Aggregate amount of commodity swaps within metals, matures in 2016	5	-4	0	0
Aggregate amount of commodity swaps within metals, matures in 2015	0	0	14	1
<b>Commodity swaps at December 31</b>	<b>5</b>	<b>-4</b>	<b>14</b>	<b>1</b>

The Group uses commodity swaps to hedge against price fluctuations in raw material, primarily base metals of specific production contracts. Hedging duration depends on the specific underlying contract, but it is typically less than 24 months. The fair value of the swaps is recognized directly in the income statement.

The cost of raw materials is a significant cost component in our products, and costs can fluctuate considerably. The Group seeks to minimize the risk related to commodity price fluctuations through contractual escalation clauses. In addition, the Group use financial hedging, when quoting fixed contract prices.

## Note 32

### Financial assets and liabilities

<i>DKK million</i>	2015	2014
Other securities and investments	388	414
Trade receivables	1,201	867
Other financial receivables	199	209
Cash	577	453
<b>Financial assets at December 31</b>	<b>2,365</b>	<b>1,943</b>
Bonds, mortgage debt and debt to credit institutions	2,104	1,936
Trade payables	398	350
Other financial liabilities	431	408
<b>Financial liabilities at December 31</b>	<b>2,933</b>	<b>2,694</b>
Assets available-for-sale	388	414
Financial assets measured at amortized cost	1,977	1,528
Derivative financial instruments	0	1
<b>Classification of financial assets at December 31</b>	<b>2,365</b>	<b>1,943</b>
Financial liabilities measured at amortized cost	2,922	2,674
Derivative financial instruments	11	20
<b>Classification of financial liabilities at December 31</b>	<b>2,933</b>	<b>2,694</b>

# Notes to the consolidated financial statements

## Note 32

### Financial assets and liabilities (continued)

<i>DKK million</i>	2015	2014
Bonds, mortgage debt and debt to credit institutions excl. amortization:		
Less than 1 year	207	242
Between 1 and 5 years	1,487	987
After 5 years	410	707
Trade payables:		
Less than 1 year	398	350
Derivative financial instruments:		
Less than 1 year	6	13
Between 1 and 5 years	4	5
After 5 years	1	2
Other financial liabilities:		
Less than 1 year	420	388
<b>Maturity analysis of financial liabilities at December 31</b>	<b>2,933</b>	<b>2,694</b>

<i>DKK million</i>	Level 1	Level 2	Level 3
Other securities and investments	16	0	363
<b>Distribution of assets stated at fair value at December 31, 2015</b>	<b>16</b>	<b>0</b>	<b>363</b>
Derivative financial instruments	0	11	0
<b>Distribution of liabilities stated at fair value at December 31, 2015</b>	<b>0</b>	<b>11</b>	<b>0</b>

Level 1: Listed prices in an active market for the same type of instrument.

Level 2: Listed prices in an active market for similar assets or liabilities or other valuation methods according to which all material input is based on observable market data.

Level 3: Valuation methods according to which material input is not based on observable market data.

Please refer to note 11 for information on input to valuation of investments in other enterprises stated at fair value in level 3.

There have been no transfers between levels 1, 2 and 3 during the year.

<i>DKK million</i>	2015	2014
Fair value of level 3 assets at January 1	391	416
Write-down recognized in other comprehensive income	-28	-25
<b>Fair value of level 3 assets at December 31</b>	<b>363</b>	<b>391</b>

# Notes to the consolidated financial statements

## Note 32

### Financial assets and liabilities (continued)

#### Financial risks

##### Currency risks

As Haldor Topsoe Group operates globally, the income statement, balance sheet, and cash flows are subject to the risk of currency fluctuations, mainly in relation to Haldor Topsoe's flows of EUR and USD.

Part of the risk is mitigated through natural hedges arising from activities where Haldor Topsoe has both income and expenses in the same currency. However, the risk is not fully covered by natural hedges, and consequently, Haldor Topsoe hedges certain future cash flows. A 5% increase in the USD/DKK exchange rate is assessed to have a positive EBIT effect of DKK 20–25 million.

##### Interest rate risk

Non-current debt consists of loans and bonds with fixed and floating interest rates. In order to secure a distribution between fixed and floating rate debt that matches the asset distribution, interest rate swaps are applied. For the floating rate portion of Haldor Topsoe's interest bearing debt, a change in the interest rate level of 1 percentage point will influence interest expenses by DKK 12 million.

##### Credit risk

The credit risk of Topsoe is primarily related to trade receivables relating to government- as well as private owned corporations. We seek to mitigate credit risk by application of instruments such, as letters of credit and bank guarantees as well as through selective structuring of payment terms etc.

##### Liquidity risks

Haldor Topsoe must maintain sufficient liquidity to fund daily operations, debt service, and for future expansion purposes. Haldor Topsoe's access to liquidity consists of cash and cash equivalents including access to credit facilities.

## Note 33

### Adjustments for non-cash items

<i>DKK million</i>	2015	2014
Financial income	-146	-124
Financial expenses	177	110
Result of investment in joint venture	9	0
Amortization, depreciation and impairment losses, including gains and losses from sale of assets	293	377
Tax	140	137
Other adjustments	-16	-44
<b>Total adjustments for non-cash items</b>	<b>457</b>	<b>456</b>

## Note 34

### Change in working capital

<i>DKK million</i>	2015	2014
Change in inventories	-32	90
Change in receivables	-406	-160
Change in contract billing	438	143
Change in suppliers, etc.	146	-79
<b>Total change in working capital</b>	<b>146</b>	<b>-6</b>

# Notes to the consolidated financial statements

## Note 35

### List of group companies

Name	Registered office	Share capital (thousand)	Voting and ownership share
Haldor Topsoe, Inc.	Houston, USA	USD 5,000	100%
Topsoe Fuel Cell A/S	Lyngby, Denmark	DKK 30,000	100%
Topsoe Energy Conv. & Storage A/S	Lyngby, Denmark	DKK 5,000	100%
Haldor Topsoe India Pvt. Ltd.	New Delhi, India	INR 131,063	100%
Haldor Topsøe (Beijing) Co., Ltd	Beijing, China	CNY 9,643	100%
Haldor Topsøe Catalyst (Tianjin) Co., Ltd.	Tianjin, China	CNY 235,000	55.56%
Haldor Topsøe International A/S	Lyngby, Denmark	DKK 500	100%
OOO Haldor Topsøe	Moscow, Russia	RUB 100	100%
Haldor Topsoe America Latina S.A.	Buenos Aires, Argentina	ARS 310	100%
Haldor Topsoe Sdn. Bhd.	Kuala Lumpur, Malaysia	MYR 1,000	100%
Haldor Topsoe Canada Limited	Vancouver, Canada	CAD 100	100%
Haldor Topsoe Catalisadores e Tecnologias do Brasil Ltda.	Rio de Janeiro, Brazil	BRL 12,143	100%
Subcontinent Ammonia Investment Company ApS	Lyngby, Denmark	DKK 1,000	100%
Haldor Topsoe S.A.	Cape Town, South Africa	ZAR 2,000	100%
Haldor Topsoe Ohio, Inc.	Wilmington, USA	USD 0	100%
Haldor Topsøe Automotive Catalyst Trading (Tianjin) Co., Ltd.	Tianjin, China	CNY 0	100%



# Financial statements for Haldor Topsoe A/S

## Income statement of Haldor Topsoe A/S

<i>DKK million</i>	Note	2015	2014
<b>Revenue</b>	2	<b>4,972</b>	<b>4,873</b>
Change in inventories of finished goods and intermediate products		-11	-5
Other operating income		40	27
Purchased equipment for contract work		-397	-330
Raw materials and consumables used		-1,609	-1,497
Other external expenses		-1,202	-1,053
<b>Gross profit</b>		<b>1,793</b>	<b>2,015</b>
Staff expenses	3	-1,263	-1,208
Depreciation, amortization and impairment losses	4	-241	-193
<b>EBIT</b>		<b>289</b>	<b>614</b>
Result of investments in group enterprises and joint venture	5	110	-57
Financial income	6	121	72
Financial expenses	7	-146	-96
<b>Profit before tax</b>		<b>374</b>	<b>533</b>
Tax	8	-46	-114
<b>Net profit</b>		<b>328</b>	<b>419</b>
<b>Proposed distribution of profit</b>			
Proposed dividend		150	200
Net revaluation reserve according to the equity method		60	-112
Retained earnings		118	331
<b>Total proposed distribution of profit</b>		<b>328</b>	<b>419</b>

## Balance sheet of Haldor Topsoe A/S

<b>Assets</b>		December 31	December 31
<i>DKK million</i>	<b>Note</b>	<b>2015</b>	<b>2014</b>
Rights		24	0
Patents		41	31
Software		36	30
Intangible assets under construction		1	6
<b>Intangible assets</b>	<b>9</b>	<b>102</b>	<b>67</b>
Land and buildings		486	530
Plant and machinery		708	727
Other fixtures and equipment		250	236
Property, plant and equipment under construction		214	244
<b>Property, plant and equipment</b>	<b>10</b>	<b>1,658</b>	<b>1,737</b>
Investments in group enterprises		1,451	1,295
Investments in joint venture		30	0
Receivables from group enterprises		34	21
Other securities and investments		25	23
Other receivables		19	18
<b>Investments</b>	<b>11</b>	<b>1,559</b>	<b>1,357</b>
<b>Non-current assets</b>		<b>3,319</b>	<b>3,161</b>
<b>Inventories</b>	<b>12</b>	<b>783</b>	<b>773</b>
Trade receivables		948	681
Contract work in progress	13	87	123
Receivables from group enterprises	14	792	975
Other receivables		73	123
Prepayments	15	26	24
<b>Receivables</b>		<b>1,926</b>	<b>1,926</b>
<b>Cash</b>		<b>267</b>	<b>113</b>
<b>Current assets</b>		<b>2,976</b>	<b>2,812</b>
<b>Assets</b>		<b>6,295</b>	<b>5,973</b>

## Balance sheet of Haldor Topsoe A/S

<b>Equity and liabilities</b>		December 31	December 31
<i>DKK million</i>	<b>Note</b>	<b>2015</b>	<b>2014</b>
Share capital	16	376	376
Revaluation reserve		161	155
Net revaluation reserve accordint to the equity method		340	199
Reserve for unpaid share capital		241	241
Retained earnings		735	660
Proposed dividend		150	200
<b>Equity</b>		<b>2,003</b>	<b>1,831</b>
Deferred tax	17	419	420
Other provisions	18	195	183
<b>Provisions</b>		<b>614</b>	<b>603</b>
Bonds		996	996
Mortgage debt		71	81
Credit institutions		368	514
Other payables		4	7
<b>Non-current liabilities</b>	19	<b>1,439</b>	<b>1,598</b>
Bonds	19	0	17
Mortgage debt	19	10	10
Credit institutions	19	146	169
Deferred income		1	2
Prepayments from customers	20	248	267
Contract work in progress	13	1,055	656
Trade payables		334	301
Payables to group enterprises		74	66
Corporate income tax		17	107
Other payables	21	354	346
<b>Current liabilities</b>		<b>2,239</b>	<b>1,941</b>
<b>Liabilities</b>		<b>3,678</b>	<b>3,539</b>
<b>Equity and liabilities</b>		<b>6,295</b>	<b>5,973</b>

## Statement of changes in equity of Haldor Topsoe A/S

<i>DKK million</i>	Share capital	Revaluation reserve	Net revaluation reserve according to the equity method	Reserve for unpaid share capital	Retained earnings	Dividend proposed	Total
Equity at January 1, 2015	376	155	199	241	660	200	1,831
Dividend paid	0	0	0	0	0	-150	-150
Interim dividend	0	0	0	0	-100	0	-100
Adjustments relating to separate foreign legal entities	0	0	81	0	0	0	81
Fair value adjustment of derivative financial instruments	0	0	0	0	8	0	8
Net profit	0	0	60	0	118	0	178
Dividend proposed	0	0	0	0	0	150	150
Other adjustments	0	6	0	0	49	-50	5
<b>Equity at December 31, 2015</b>	<b>376</b>	<b>161</b>	<b>340</b>	<b>241</b>	<b>735</b>	<b>150</b>	<b>2,003</b>

# Notes to the financial statements of Haldor Topsoe A/S

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# Notes to the financial statements of Haldor Topsoe A/S

## Note 1

### Accounting policies

#### Basis of preparation

The financial statements of Haldor Topsoe A/S have been prepared in accordance with the provisions of the Danish Financial Statements Act applying to large enterprises of reporting class C.

The accounting policies are unchanged from last year.

The applied accounting policies are similar to those of the Group except for the following matters:

#### Other securities and investments

Other investments are measured at market value or estimated fair value. Unrealized value adjustments are included in the income statement in "Financial income" or "Financial expenses". When the value of an in-

vestment cannot be assessed with reasonable certainty, the investment is measured at cost.

#### Investments in group enterprises

Investments in group enterprises are recognized and measured under the equity method.

Group enterprises which have negative equity are measured at DKK 0, and receivables from these group enterprises are written down by the parent company's share of the negative equity if it is estimated to be irrecoverable.

If the negative equity exceeds receivables, the remaining amount is recognized under provisions to the extent the parent company has a legal or constructive obligation to cover the group enterprise's deficit.

The item "Result of investments in group enterprises" in the income statement includes the proportionate share of the result after tax.

#### Cash flow statement

No separate cash flow statement has been prepared for the parent company as the parent company's cash flow statement is included in the consolidated cash flow statement.

# Notes to the financial statements of Haldor Topsoe A/S

## Note 2

### Revenue

The Company's activities are in the business segment of providing catalytic processes for integrated solutions to industrial plants. The provision of these integrated solutions comprises fundamental and applied research, reaction engineering, process engineering, mechanical design and production and supply of catalysts.

The Company has not disclosed the revenue split by segments for competitive reasons, as disclosure of this information is assessed to be potentially harmful to the Company.

## Note 3

### Staff expenses

<i>DKK million</i>	2015	2014
Wages and salaries	1,094	1,039
Pensions	127	123
Other social security contributions	68	71
<b>Total</b>	<b>1,289</b>	<b>1,233</b>
Capitalization of work performed on property, plant and equipment	-26	-25
<b>Total staff expenses</b>	<b>1,263</b>	<b>1,208</b>
Executive Management salary and pension	11	10
Fee to Board of Directors	4	4
<b>Total remuneration to Executive Management and Board of Directors</b>	<b>15</b>	<b>14</b>
Average number of employees	1,977	1,945

## Note 4

### Depreciation, amortization and impairment losses

<i>DKK million</i>	2015	2014
Rights	1	0
Patents	7	4
Software	15	13
Land and buildings	20	29
Plant and machinery	117	94
Other fixtures and equipment	81	53
<b>Total depreciation, amortization and impairment losses</b>	<b>241</b>	<b>193</b>



# Notes to the financial statements of Haldor Topsoe A/S

## Note 5

### Result of investments in group enterprises and joint venture

<i>DKK million</i>	2015	2014
Share of result of group enterprises, net	128	-55
Change in intercompany profit	-9	-2
Share of result of joint venture, net	-9	0
<b>Total income from investments in group enterprises and joint venture</b>	<b>110</b>	<b>-57</b>

## Note 6

### Financial income

<i>DKK million</i>	2015	2014
Income from other investments	1	1
Interest received from group enterprises	25	25
Interest income	7	0
Foreign currency translation adjustment	85	45
Value adjustments of other investments	2	0
Other financial income	1	1
<b>Total financial income</b>	<b>121</b>	<b>72</b>

## Note 7

### Financial expenses

<i>DKK million</i>	2015	2014
Interest expenses	49	56
Foreign currency translation adjustment	93	36
Other financial expenses	4	4
<b>Total financial expenses</b>	<b>146</b>	<b>96</b>

## Note 8

### Tax

<i>DKK million</i>	2015	2014
Current tax for the year	13	105
Change in deferred tax for the year	59	36
Change in corporate tax rate	-34	-30
Adjustments to prior years	8	3
<b>Total tax</b>	<b>46</b>	<b>114</b>

# Notes to the financial statements of Haldor Topsoe A/S

## Note 9

### Intangible assets

<i>DKK million</i>	Rights	Patents	Software	Intangible assets under construction
Cost at January 1, 2015	0	91	131	6
Additions during the year	25	18	12	4
Disposals during the year	0	-5	0	0
Transfers during the year	0	0	9	-9
<b>Cost at December 31, 2015</b>	<b>25</b>	<b>104</b>	<b>152</b>	<b>1</b>
Amortization and impairment losses at January 1, 2015	0	60	101	0
Amortization during the year	1	7	15	0
Reversal of amortization and impairment losses on assets sold	0	-4	0	0
<b>Amortization and impairment losses at December 31, 2015</b>	<b>1</b>	<b>63</b>	<b>116</b>	<b>0</b>
<b>Carrying amount at December 31, 2015</b>	<b>24</b>	<b>41</b>	<b>36</b>	<b>1</b>

## Note 10

### Property, plant and equipment

<i>DKK million</i>	Land and buildings	Plant and machinery	Other fixtures and equipment	Property, plant and equipment under construction
Cost at January 1, 2015	725	1,991	723	244
Additions during the year	2	23	30	118
Disposals during the year	-50	-3	-34	0
Transfers during the year	4	77	67	-148
<b>Cost at December 31, 2015</b>	<b>681</b>	<b>2,088</b>	<b>786</b>	<b>214</b>
Revaluation at January 1, 2015	198	8	0	0
<b>Revaluation at December 31, 2015</b>	<b>198</b>	<b>8</b>	<b>0</b>	<b>0</b>
Depreciation and impairment losses at January 1, 2015	393	1,272	487	0
Depreciation for the year	20	117	81	0
Reversal of depreciation on assets sold and scrapped	-20	-1	-32	0
<b>Depreciation and impairment losses at December 31, 2015</b>	<b>393</b>	<b>1,388</b>	<b>536</b>	<b>0</b>
<b>Carrying amount at December 31, 2015</b>	<b>486</b>	<b>708</b>	<b>250</b>	<b>214</b>
Carrying amount at December 31, 2015, under the depreciated cost model	342	708	250	214

Borrowing costs capitalized in 2015 amounted to DKK 0 million (2014: DKK 0 million).

# Notes to the financial statements of Haldor Topsoe A/S

## Note 11

### Investments

<i>DKK million</i>	Investments in group enterprises	Investments in joint venture	Receivables from group enterprises
Cost at January 1, 2015	861	0	18
Additions during the year	7	39	22
Disposals during the year	0	0	-5
<b>Cost at December 31, 2015</b>	<b>868</b>	<b>39</b>	<b>35</b>
Revaluations at January 1, 2015	434	0	3
Foreign currency adjustments	87	0	-4
Dividend	-50	0	0
Net profit for the year	119	-9	0
Other adjustments	-7	0	0
<b>Revaluations at December 31, 2015</b>	<b>583</b>	<b>-9</b>	<b>-1</b>
<b>Carrying amount at December 31, 2015</b>	<b>1,451</b>	<b>30</b>	<b>34</b>

<i>DKK million</i>	Other securities and investments	Other receivables
Cost at January 1, 2015	16	35
Additions during the year	0	1
Disposals during the year	0	0
<b>Cost at December 31, 2015</b>	<b>16</b>	<b>36</b>
Value adjustment at January 1, 2015	7	-17
Value adjustment during the year	2	0
<b>Value adjustment at December 31, 2015</b>	<b>9</b>	<b>-17</b>
<b>Carrying amount at December 31, 2015</b>	<b>25</b>	<b>19</b>

#### Investment in joint venture is specified as follows:

##### Ferrostaal Topsoe Projects GmbH

In 2015, Haldor Topsoe A/S invested in a joint venture together with Ferrostaal GmbH. The share capital of the joint venture is EUR 10 million of which the Group owns 50%. The investment is measured under the equity method.

#### Other securities and investments are specified as follows:

##### Chambal Fertilizer and Chemical Ltd., India

Haldor Topsoe A/S has an investment in Chambal Fertilizer and Chemicals Ltd., corresponding to 0.5% of the share capital. The investment is measured at fair value based on listed market value.

##### Fatima Fertilizer Co. Ltd., Pakistan

Haldor Topsoe A/S has an investment in Fatima Fertilizer Co. Ltd., corresponding to 0.05% of the share capital. The investment is measured at fair value based on listed market value.

##### Faradion Ltd., United Kingdom

Haldor Topsoe A/S has an investment in Faradion Ltd., corresponding to 19.07% of the share capital. The investment is measured at fair value based on market value.

# Notes to the financial statements of Haldor Topsoe A/S

## Note 11

### Investments (continued)

Investments in group enterprises are specified as follows:

Name	Registered office	Share capital (thousand)	Voting and ownership share
Haldor Topsoe, Inc.	Houston, USA	USD 5,000	100%
Topsoe Fuel Cell A/S	Lyngby, Denmark	DKK 30,000	100%
Topsoe Energy Conv. & Storage A/S	Lyngby, Denmark	DKK 5,000	100%
Haldor Topsoe India Pvt. Ltd.	New Delhi, India	INR 131,063	100%
Haldor Topsøe (Beijing) Co., Ltd	Beijing, China	CNY 9,643	100%
Haldor Topsøe Catalyst (Tianjin) Co.,Ltd.	Tianjin, China	CNY 235,000	55.56%
Haldor Topsøe International A/S	Lyngby, Denmark	DKK 500	100%
OOO Haldor Topsøe	Moscow, Russia	RUB 100	100%
Haldor Topsoe America Latina S.A.	Buenos Aires, Argentina	ARS 310	100%
Haldor Topsoe Sdn. Bhd.	Kuala Lumpur, Malaysia	MYR 1,000	100%
Haldor Topsoe Canada Limited	Vancouver, Canada	CAD 100	100%
Haldor Topsoe Catalisadores e Tecnologias do Brasil Ltda.	Rio de Janeiro, Brazil	BRL 12,143	100%
Subcontinent Ammonia Investment Company ApS	Lyngby, Denmark	DKK 1,000	100%
Haldor Topsoe S.A.	Cape Town, South Africa	ZAR 2,000	100%
Haldor Topsoe Ohio, Inc.	Wilmington, USA	USD 0	100%
Haldor Topsøe Automotive Catalyst Trading (Tianjin) Co., Ltd.	Tianjin, China	CNY 0	100%

## Note 12

### Inventories

DKK million	2015	2014
Raw materials and consumables	192	170
Work in progress	110	107
Finished goods	481	496
<b>Inventories at December 31</b>	<b>783</b>	<b>773</b>

## Note 13

### Contract work in progress

DKK million	2015	2014
Selling price of work performed at the balance sheet date	4,960	4,734
Payments received on account	-5,928	-5,267
<b>Contract work in progress at December 31</b>	<b>-968</b>	<b>-533</b>
Contract work in progress recognized in assets	87	123
Contract work in progress recognized in liabilities	-1,055	-656
<b>Contract work in progress at December 31</b>	<b>-968</b>	<b>-533</b>

# Notes to the financial statements of Haldor Topsoe A/S

## Note 14

### Receivables from group enterprises

<i>DKK million</i>	2015	2014
Deposit with the parent company	375	467
Unpaid share capital	241	241
Other receivables	176	267
<b>Receivables from group enterprises at December 31</b>	<b>792</b>	<b>975</b>

Deposit with the parent company is part of a cash pooling arrangement.

## Note 15

### Prepayments

Prepayments mainly consist of prepaid property tax, licenses and office rent.

## Note 16

### Share capital

<i>Number of shares</i>	2015	2014
<b>Shares of a nominal value of DKK 376,000,000</b>	<b>376,000</b>	<b>376,000</b>

The share capital consists of 376,000 shares with a nominal value of DKK 1,000 each. No shares carry any special right.

There has been no change in the share capital in 2015.

The following shareholder is recorded in the parent company's register of shareholders as holding at least 5% of the votes or at least 5% of the share capital:

Haldor Topsøe Holding A/S, Lyngby, Denmark

## Note 17

### Deferred tax

<i>DKK million</i>	2015	2014
Intangible assets and property, plant and equipment	50	64
Inventories	21	20
Work in progress	353	336
Provisions	-26	-26
Other	21	26
<b>Deferred tax at December 31</b>	<b>419</b>	<b>420</b>

Deferred tax has been provided at 22% corresponding to the current Danish tax rate.

# Notes to the financial statements of Haldor Topsoe A/S

## Note 18

### Other provisions

<i>DKK million</i>	2015	2014
Warranty provision for catalysts and technology projects	194	182
Other provisions	1	1
<b>Other provisions at December 31</b>	<b>195</b>	<b>183</b>
Of this, due after more than 1 year	195	183

## Note 19

### Non-current liabilities

<i>DKK million</i>	2015	2014
<b>Bonds</b>		
After 5 years	0	500
Between 1 and 5 years	996	496
<b>More than 1 year</b>	<b>996</b>	<b>996</b>
Less than 1 year	0	17
<b>Bonds at December 31</b>	<b>996</b>	<b>1,013</b>

Amortization cost included under non-current liabilities, bonds. 5 6

### Mortgage debt

After 5 years	30	40
Between 1 and 5 years	41	41
<b>More than 1 year</b>	<b>71</b>	<b>81</b>
Less than 1 year	10	10
<b>Mortgage debt at December 31</b>	<b>81</b>	<b>91</b>

### Credit institutions

After 5 years	100	167
Between 1 and 5 years	268	347
<b>More than 1 year</b>	<b>368</b>	<b>514</b>
Less than 1 year	146	169
<b>Credit institutions at December 31</b>	<b>514</b>	<b>683</b>

### Other payables

After 5 years	1	3
Between 1 and 5 years	3	4
<b>More than 1 year</b>	<b>4</b>	<b>7</b>
Less than 1 year	1	1
<b>Other payables at December 31</b>	<b>5</b>	<b>8</b>

Other payables consist of derivative financial instruments.

# Notes to the financial statements of Haldor Topsoe A/S

## Note 20

### Prepayments from customers

<i>DKK million</i>	2015	2014
Prepayments related to license agreements	12	15
Prepayments related to sale of goods	236	252
<b>Prepayments from customers at December 31</b>	<b>248</b>	<b>267</b>

## Note 21

### Other payables

<i>DKK million</i>	2015	2014
Staff related items	203	206
Fair value of derivative financial instruments	7	11
Tax related items	5	7
Other payables	139	122
<b>Other payables at December 31</b>	<b>354</b>	<b>346</b>

## Note 22

### Assets provided as security

Non-current assets (land and buildings) with a carrying amount of DKK 233 million (2014: DKK 202 million) have been provided as security. The remaining balance of the loans secured by non-current assets as of December 31, 2015, was DKK 81 million (2014: DKK 49 million). Non-current assets are provided by means of real estate mortgage deeds and owners' mortgage deeds. The nominal value is DKK 111 million (2014: DKK 70 million).

Assets are provided as security for mortgage debt and other non-current loans. In case of other debt to the secured creditor, the asset(s) provided as security may – until release thereof – serve as security for any present or future obligation that the Group may have towards such parties.

## Note 23

### Guarantees

The outstanding balance as of December 31, 2015, for guarantees given by banks and credit insurance institutions on the Company's behalf for contract work, etc. amounted to DKK 791 million (2014: DKK 620 million). Other guarantees given by banks on the Company's behalf amounted to DKK 96 million (2014: DKK 242 million), being guarantees for non-current loans from the European Investment Bank.

Total bank/insurance guarantees given on the Company's behalf amounted to DKK 887 million (2014: DKK 862 million).

The Company has issued parent company guarantees of DKK 3 million (2014: DKK 95 million) for certain obligations in subsidiaries.

The outstanding balance as of December 31, 2015, for bank guarantees received by the Company from suppliers for contract work, etc. amounted to DKK 78 million (2014: DKK 98 million).

The outstanding balance as of December 31, 2015, for letters of credit issued in favor of the Company as security for payment under various supply contracts amounted to DKK 536 million (2014: DKK 468 million).

The outstanding balance as of December 31, 2015, for letters of credit issued on behalf of the Company / Group towards suppliers for contract work, etc. amounted to DKK 4 million (2014: DKK 0 million).

# Notes to the financial statements of Haldor Topsoe A/S

## Note 24

### Contractual obligations

<i>DKK million</i>	2015	2014
Less than 1 year	87	62
Between 1 and 5 years	171	190
After 5 years	468	495
<b>Contractual obligations at December 31</b>	<b>726</b>	<b>747</b>

Leases and rental agreements relate to premises and equipment, etc. and extend in some cases to 2032.

## Note 25

### Contingent liabilities

The Company's property in Frederikssund, Denmark, has been found to be contaminated. The Company has been ordered to prepare a proposal for remediation of the contamination. Management assesses that the remediation costs will not be significant.

## Note 26

### Fee to auditors appointed at the general meeting

<i>DKK million</i>	2015	2014
Statutory audit fee	2	1
Tax assistance	2	1
Other assistance	2	1
<b>Total fee to auditors appointed at the general meeting</b>	<b>6</b>	<b>3</b>

## Note 27

### Related parties

#### Control

Haldor Topsøe Holding A/S, Lyngby, Denmark - shareholder

No transactions have been carried out with the Board of Directors, Executive Management, key management staff, shareholders, group enterprises or other related parties which have not been under normal market conditions.

## Note 28

### Consolidated financial statements

Haldor Topsøe Holding A/S prepares consolidated financial statements which include the Company and its group enterprises.



# Statement by the Executive Management and Board of Directors on the Annual Report

The Executive Management and Board of Directors have today considered and adopted the Annual Report 2015 of Haldor Topsoe A/S.

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as adopted by the EU (IFRS), and the financial statements of the parent company have been prepared in accordance with the Danish Financial Statements Act. In our opinion, the parent company finan-

cial statements and the consolidated financial statements give a true and fair view of the financial position at December 31, 2015 of the group and the parent company and of the results of the group and parent company operations and of the group's cash flows for 2015 in accordance with the applied accounting policies.

In our opinion, the Management's review includes a true and fair account of the development in the operations and financial circumstances of the group

and the parent company, and the results for the year and of the financial position of the group and the parent company as well as a description of the most significant risks and elements of uncertainty facing the group and the parent company.

We recommend that the Annual Report be adopted at the Annual General Meeting.

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Lyngby, March 31, 2016

## Executive Management

**Bjerne S. Clausen**  
President and CEO

**Peter Rønneft Andersen**  
Executive Vice President and CFO

## Board of Directors

**Henrik Topsøe**  
Chairman

**Jeppe Christiansen**  
Vice Chairman

**Jørgen Huno Rasmussen**  
Vice Chairman

**Jakob Haldor Topsøe**  
Member

**Christina Topsøe**  
Member

**Jens Kehlet Nørskov**  
Member

**Henrik Stiesdal**  
Member

**Anders Heine Jensen**  
Member

**Jette Søvang Christiansen**  
Employee representative

**Aino Irene Saldo**  
Employee representative

**Søren Toft**  
Employee representative

**Martin Østberg**  
Employee representative

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The Annual Report is presented and approved at the annual general meeting on March 31, 2016



Chair of the meeting, Lene Ramm

# To the shareholder of Haldor Topsoe A/S

## Report on Consolidated Financial Statements and parent company Financial Statements

We have audited the Consolidated Financial Statements and the parent company Financial Statements for the financial year January 1 to December 31, 2015 which comprise statement of profit and loss, balance sheet, statement of changes in equity and notes, including summary of significant accounting policies as well as statement of comprehensive income and cash flow statement for the Group. The Consolidated Financial Statements are prepared in accordance with International Financial Reporting Standards as adopted by the EU, and the parent company Financial Statements are prepared under the Danish Financial Statements Act. Moreover the Consolidated Financial Statements are prepared in accordance with additional disclosure requirements of the Danish Financial Statements Act.

## Management's responsibility for the Consolidated Financial Statements and the parent company Financial Statements

Management is responsible for the preparation of Consolidated Financial Statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU and Danish disclosure requirements and for preparing parent company Financial Statements that give a true and fair view in accordance with the Danish Financial Statements Act, and for such internal control as Management determines is necessary to enable the preparation of Consolidated Financial Statements and parent company Financial Statements that are free from material misstatement, whether due to fraud or error.

## Auditor's responsibility

Our responsibility is to express an opinion on the Consolidated Financial Statements and the parent company Financial Statements based on our audit. We conducted our audit in accordance with International Standards on

Auditing and additional requirements under Danish audit regulation. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the Consolidated Financial Statements and the parent company Financial Statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Consolidated Financial Statements and the parent company Financial Statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Consolidated Financial Statements and the parent company Financial Statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation of Consolidated Financial Statements and parent company Financial Statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management, as well as evaluating the overall presentation of the Consolidated Financial Statements and the parent company Financial Statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for an audit opinion.

The audit has not resulted in any qualification.

## Opinion

In our opinion, the Consolidated Financial Statements give a true and fair view of the Group's financial position at December 31, 2015 and of the results of the Group's operations and cash flows for the financial year

January 1 to December 31, 2015 in accordance with International Financial Reporting Standards as adopted by the EU and additional disclosure requirements of the Danish Financial Statements Act.

Moreover, in our opinion, the parent company Financial Statements give a true and fair view of the parent company's financial position at December 31, 2015 and the results of the parent Company's operations for the financial year January 1 to December 31, 2015 in accordance with the Danish Financial Statements Act.

## Statement on Management's review

We have read Management's review (page 1-23) in accordance with the Danish Financial Statements Act. We have not performed any procedures additional to the audit of the Consolidated Financial Statements and the parent company Financial Statements. On this basis, in our opinion, the information provided in Management's review is consistent with the Consolidated Financial Statements and the parent company Financial Statements.

*Copenhagen, March 31, 2016*

**PricewaterhouseCoopers  
Statsautoriseret  
Revisionspartnerselskab**  
CVR no. 33 77 12 31

## Kim Fücksel

State Authorized Public Accountant

## Mikkel Sthyr

State Authorized Public Accountant

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**HALDOR TOPSØE** 