2016 Full Year Results

2 March 2017
François Wanecq
Chief Executive
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Agenda

- 2016 Strategic progress
- Steel and Foundry markets
- 2016 Group and Divisional performance
- Financial Review
- Outlook
2016 Summary

- Resilient performance showing progress despite broadly flat end markets

- Restructuring programme ahead of plan and delivered
  - £16.6m cost savings in 2016
  - Total annual programme benefits further increased to £35m by the end of 2017 at a cost of £45m

- Global steel and foundry markets showed continued signs of stabilisation, albeit mixed and at low levels

- Good progress in structural growth markets – China, India and Brazil

- Strong cashflow performance, with cash conversion of 94%

- Strong balance sheet, with c.£340m of available liquidity

- Increased the dividend by 1.7% to 16.55 pence per share
2016 Strategic Progress
Delivering on the strategy

• **Maintained technology leadership**
  - Sales of new products increased by 75% over three years
  - Creation of a new R&D centre for Advanced Refractories in India

• **Increased penetration of value creating solutions**
  - Successful start of the SST line at Hyundai
  - Growing sales of Metal Treatment System in Aluminum foundries

• **Captured growth in developing markets**
  - Growing ahead of underlying steel market in India and Brazil
  - Foundry sales and margins progressing in China

• **Improved cost leadership**
  - Margin improvement
  - Enhanced restructuring programme, savings increased further to £35m

• **Built Technical Services offering**
  - Sales of lasers, Accuoptix and Avemis progressed significantly towards the end of the year
Technology leadership: sales of new products increased 75% in 3 years

- Success of our R&D management plan launched in 2013

- Sales of new products growing to 14% from 8% since 2014 on average for the Group
  - New product sales increased to 19% from 9.5% in Flow Control
New process technologies driving growth

- Robotics penetration success: We commissioned our first ladle handling robot for Hyundai in 2016
- Rapid penetration of foundry filter sales in China
- Laser sales coupled with total refractory management of ladles
- Shagang investing in cast strip lines with Nucor technology that we will equip with refractory solutions
- Accuoptix has demonstrated its ability to reduce ladle overheating
Capturing growth in China

Steel Flow Control

- Decline of sales during 2015 whilst exiting lower credit quality customers to minimise receivable growth
- Recovery in H2 2016 due to penetration in thin slab and private sector

Foundry

- Growth of sales in 2016 post ramp-up of new plant
- Margin increase in H2 2016 due to penetration in coatings and feeding systems
Growing in India, Brazil and Mexico

- Growth in India exceeded our expectations in 2016
  - Steel volumes: +7.4%
  - Vesuvius sales: +14.4%

- Success of our “Win with the winners” strategy in Brazil

- Consolidation of our position in Mexico
Improved cost leadership through restructuring

- Restructuring program increased further to £35m savings (£27m delivered by end 2016) after being initiated with target of £10m in Q2 2015
- Total cost of £45m (£44.1m spent and provisioned at end 2016)

Cost Savings Target Progression

Cost Savings Delivery vs Costs

Higher costs due to plant closures
Technical services development

- Technical services is a group strategy – developments are taking place in all divisions

- Transformation from sales of equipment into sales of a service over time has a short term negative impact on sales

- A portion of the sales are recorded in the other BUs as we operate through the global Vesuvius sales network

- Significant progress across key product lines:
  - Accuoptix demand growing rapidly due to confirmation it enables reduction of steel overheat by 10°C minimum
  - Laser orders growing with total refractory management contracts for ladles and converters
  - Value-added SERT and Avemis solutions aiding sales of Flow Control products
Steel and Foundry Markets
2016 steel production broadly stable with continued shift to emerging economies

- World steel production up 0.7%
  - China (50.4% of global production) up 1.2%
  - Rest of world up 0.2%
    - Brazil still struggling with political difficulties

- 31 out of 66 WSA countries reported an increase
  - 4 of top 10 producers reported an increase
  - The top 10 producers represent 85% of global production

- India remains the fastest growing global producer

(1) Size of bubble reflects relative amount of steel produced
Steel Division sales ahead of underlying market in emerging economies

Rate of Growth in Steel Production & Revenues 2016 vs 2013

Top Steel Producers

(1) Size of bubble refers to relative size of Steel Division Revenue in each country
(2) India includes Kazakhstan
China steel market trends

- China launched a plan called ‘Made in China 2025’ emphasising initiatives such as:
  - Robotics
  - Applying the tools of information technology to production processes
  - Pollution reduction

- Steel industry accelerates its transformation
  - Continuation of the shift from Long to Flat (+160bps in 2016)
  - Absorption of Wuhan steel by Baosteel
  - Investment in cast strip lines by Shagang
  - Development of Thin slab in Rhizao and Quality Strip Plant in Jingtang
China foundry market trends

- In China, commercial vehicle production grew by 6% in 2016 and passenger vehicles increased by 16% to 24 million units.

- China’s 5 year plan envisages foundry industry growth at 3-4%, with Aluminum and Magnesium Alloy and Ductile Iron the fastest growing segments.

[Foundry China Sales Evolution graph]

- Filters
- Non Ferrous Metal Treatment

£m

2016 Group and Divisional Performance
2016 trading performance at constant currency

Revenue
-3.5%

Trading Profit
-2.8%

Return on Sales
+10 bps

H1 2015: 10.0%
H2 2015: 8.9%
H1 2016: 8.8%
H2 2016: 10.1%

9.4%
9.5%
Steel Division: performance

<table>
<thead>
<tr>
<th>£m</th>
<th>2016</th>
<th>2015</th>
<th>Change</th>
<th>Underlying* change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue</td>
<td>942.0</td>
<td>897.6</td>
<td>+4.9%</td>
<td>-4.8%</td>
</tr>
<tr>
<td>Total Trading Profit</td>
<td>79.2</td>
<td>79.5</td>
<td>-0.5%</td>
<td>-6.6%</td>
</tr>
<tr>
<td>Trading Margin %</td>
<td>8.4%</td>
<td>8.9%</td>
<td>-50bps</td>
<td>-20bps</td>
</tr>
</tbody>
</table>

* On an underlying basis: at constant currency and excluding the impact of acquisitions and disposals

- Steel Underlying trading profit down 6.6% reflecting:
  - Lower activity in key regions of NAFTA and EMEA reaching a trough in Q1 2016
  - Consecutive drop through largely compensated by delivered restructuring savings
    - £16.1m of savings delivered in 2015 and 2016 at a cost of £35.9m
    - £23.2m of costs incurred in 2016 due to plant closures in European Flow Control businesses
- Recovery initiated in Q2 2016 leading to:
  - Margin progress from 8.0% to 9.4% in H2 2016
Foundry Division: performance overview

- Underlying margin improvement of 110bps and trading profit up 7.3% vs 2015 extending the good progress made in 2015
- £7.5m of savings delivered in 2015 and 2016 at a cost of £4.4m
- Margin progress from 11.1% to 12.5% in H2 2016

<table>
<thead>
<tr>
<th>£m</th>
<th>2016</th>
<th>2015</th>
<th>Change</th>
<th>Underlying* change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue</td>
<td>459.4</td>
<td>424.4</td>
<td>+8.3%</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Total Trading Profit</td>
<td>54.1</td>
<td>44.5</td>
<td>+21.6%</td>
<td>+7.3%</td>
</tr>
<tr>
<td>Trading Margin %</td>
<td>11.8%</td>
<td>10.5%</td>
<td>+130bps</td>
<td>+110bps</td>
</tr>
</tbody>
</table>

* On an underlying basis: at constant currency and excluding the impact of acquisitions and disposals
Financial Review

Guy Young
Chief Financial Officer
## Income statement

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
<th>Year on Year Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£m</td>
<td>£m</td>
<td>As reported</td>
</tr>
<tr>
<td>Revenue</td>
<td>1,401.4</td>
<td>1,322.0</td>
<td>+6.0%</td>
</tr>
<tr>
<td>Trading Profit</td>
<td>133.3</td>
<td>124.0</td>
<td>+7.5%</td>
</tr>
<tr>
<td><em>Trading margin %</em></td>
<td>9.5%</td>
<td>9.4%</td>
<td>+10bps</td>
</tr>
<tr>
<td>Net finance costs</td>
<td>(14.5)</td>
<td>(15.4)</td>
<td></td>
</tr>
<tr>
<td>Share of JV</td>
<td>1.0</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td><strong>Headline Profit before Tax</strong></td>
<td>119.8</td>
<td>108.6</td>
<td>+8.5%</td>
</tr>
<tr>
<td><strong>Effective tax rate %</strong></td>
<td>26.4%</td>
<td>25.5%</td>
<td>+2.7%</td>
</tr>
<tr>
<td>Tax</td>
<td>(31.4)</td>
<td>(27.7)</td>
<td></td>
</tr>
<tr>
<td><strong>Non-controlling Interest</strong></td>
<td>(6.3)</td>
<td>(5.2)</td>
<td></td>
</tr>
<tr>
<td><strong>Headline Earnings</strong></td>
<td>82.1</td>
<td>75.7</td>
<td>+8.4%</td>
</tr>
<tr>
<td><strong>Headline Earnings per share (p)</strong></td>
<td>30.4</td>
<td>28.1</td>
<td></td>
</tr>
<tr>
<td><strong>Dividend per share (p)</strong></td>
<td>16.550p</td>
<td>16.275p</td>
<td></td>
</tr>
</tbody>
</table>

(1) Underlying basis is at constant currency and excludes separately reported items and the impact of acquisitions and disposals
Underlying revenue fell by 4.0% and trading profit by 1.5%

- Revenue up £79.4m on a reported basis (+6.0%) but down £58.5m on an underlying basis (-4.0%)
- Acquisitions added £13.2m of revenue
  - Sidermes, and the mould flux business of Carboox
- Regional differences with selected weaker developed markets (US –14%, UK –17%) but good growth in selected developing markets (India +14%)

- Trading profit up £9.3m on a reported basis (+7.5%) but down £2.0m on an underlying basis (-1.5%)
- Trading margin up 10 bps on a reported basis and 30 bps on an underlying basis
- Revenue drop through of £58.5m should have impacted trading profit by £23.4m but mitigated to £2.0m through restructuring and cost reduction
### Revenue and Trading Profit Performance Year on Year by Division

#### Revenue – Steel

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2015 Reported</th>
<th>FX</th>
<th>M&amp;A</th>
<th>Markets &amp; Closures</th>
<th>FY 2016 Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2015</td>
<td>897.6</td>
<td>84.3</td>
<td>7.0</td>
<td>46.9</td>
<td>942.0</td>
</tr>
</tbody>
</table>

#### Trading Profit – Steel

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2015 Reported</th>
<th>FX</th>
<th>M&amp;A</th>
<th>Sales Drop-through</th>
<th>Restructure</th>
<th>Other</th>
<th>FY 2016 Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2015</td>
<td>79.5</td>
<td>7.2</td>
<td>1.8</td>
<td>18.8</td>
<td>12.5</td>
<td>0.6</td>
<td>79.2</td>
</tr>
</tbody>
</table>

#### Revenue – Foundry

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2015 Reported</th>
<th>FX</th>
<th>Market &amp; Closures</th>
<th>FY 2016 Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2015</td>
<td>424.4</td>
<td>46.6</td>
<td>11.6</td>
<td>459.4</td>
</tr>
</tbody>
</table>

#### Trading Profit – Foundry

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2015 Reported</th>
<th>FX</th>
<th>Sales Drop-through</th>
<th>Restructure</th>
<th>Other</th>
<th>FY 2016 Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2015</td>
<td>44.5</td>
<td>5.9</td>
<td>4.6</td>
<td>4.1</td>
<td>4.2</td>
<td>54.1</td>
</tr>
</tbody>
</table>
All major currencies strengthened against sterling

<table>
<thead>
<tr>
<th>Currencies (Impact of FX translation on GBP reporting currency)</th>
<th>2016 Dec YTD Average Rates</th>
<th>2015 FY Average Rates</th>
<th>2016 Average Rates v 2015 Average Rates</th>
<th>Impact on Sales (£m)</th>
<th>Impact on TP (£m)</th>
<th>Impact on net debt (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>1.36</td>
<td>1.53</td>
<td>11.2%</td>
<td>47.6</td>
<td>4.2</td>
<td>-20.0</td>
</tr>
<tr>
<td>EUR</td>
<td>1.22</td>
<td>1.38</td>
<td>11.1%</td>
<td>40.6</td>
<td>1.1</td>
<td>-16.4</td>
</tr>
<tr>
<td>INR</td>
<td>91.13</td>
<td>98.00</td>
<td>7.0%</td>
<td>7.3</td>
<td>1.4</td>
<td>3.2</td>
</tr>
<tr>
<td>RMB</td>
<td>9.00</td>
<td>9.60</td>
<td>6.3%</td>
<td>7.2</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>JPY</td>
<td>147.62</td>
<td>185.07</td>
<td>20.2%</td>
<td>8.7</td>
<td>1.6</td>
<td>-</td>
</tr>
<tr>
<td>BRL</td>
<td>4.75</td>
<td>5.09</td>
<td>6.7%</td>
<td>4.6</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>ZAR</td>
<td>20.00</td>
<td>19.48</td>
<td>-2.7%</td>
<td>-1.0</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td>15.9</td>
<td>3.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>130.9</td>
<td>13.1</td>
<td>-30.3</td>
</tr>
</tbody>
</table>
Geographic diversification counters currency risk

Balance sheet risk
- Europe and NAFTA account for c.60% of Group profits
- Group debt split across GBP, USD, and EUR to match

P&L risk
- Low GBP exposure as UK forecast of approx. 4% of sales
Achieved 94% cash conversion rate

- Full year cash conversion of 93.8%
- Capex in 2016 was below depreciation
- Free cash flow at £61.4m is 49% of OCF
- Working capital increased in 2016
- Income tax paid increased in line with ETR
Net debt increased to £320.3m due largely to FX movements

- Net debt increased £28.7m in the year

- Acquisition of mould flux business of Carboox at £7.3m, and £0.4m release of contingent payments for prior year acquisition (Process Metrix)

- FX impact was pronounced at year end with all global currencies strengthening against sterling. The Euro and the US dollar have strengthened by 13.5% and 16.3%, respectively
Strong balance sheet with significant liquidity

Gross Debt and Available Liquidity

- Gross Debt
  - Short Term Facilities: £46m
  - RCF: £142m
  - USPP: £277m
  - Cash: £158m
  - Total: £465m

- Liquidity
  - Short Term Facilities: £37m
  - RCF: £144m
  - USPP: £340m
  - Total: £465m

Maturities

- Short Term Facilities
  - 2017: £89m
  - 2018: £46m
  - 2019: £114m
  - 2020: £300m
  - 2021-2028: £74m

Pension Deficit

- Pension Deficit: £83.8m
- Return on plan assets: £35.3m
- Actuarial gains/losses: £93.3m
- Service/admin charges: £6.7m
- Net interest: £1.3m
- Gain on settlements: £5.2m
- Cash contributions: £14.4m
- FX: £15.2m
- 2017: £29.4m
Efficient management of working capital (constant currency)

- Focus on inventory management during 2016 has yielded clear benefits for Advanced Refractories and Foundry divisions.
- Ongoing renegotiation efforts on payable terms during 2016.
- Launching supplier finance project for 2017 has potential over time to materially increase average payment terms.
- Continued efforts to tighten credit control and customer selection criteria in developing markets.
- Technical Services working capital will experience volatility as business ramped-up.
Capital expenditure discipline

- Rigorous process for approving capex as part of annual budgeting process
- Capex split into three key categories: maintenance; growth; special projects
- No near-term capacity additions planned
- Capex declined by 8% in constant currency terms from 2015 to 2016
Financial objectives remain consistent

• Focus on cost control and delivery of restructuring
• Improve working capital efficiency
• Maintain high levels of cash conversion
• Continue with the conservative approach to gearing
• Maintain financial flexibility
• Improve shareholder returns
Outlook
2016 Summary

- Resilient results showing progress despite broadly flat end markets

- Restructuring programme ahead of plan and delivered
  - £16.6m cost savings in 2016
  - Total annual programme benefits further increased to £35m by the end of 2017 at a cost of £45m

- Global steel and foundry markets showing signs of stabilisation, albeit mixed and at low levels

- Good progress in structural growth markets – China, India and Brazil

- Strong cashflow performance, with cash conversion of 94%

- Strong balance sheet, with c.£340m of available liquidity

- Increased the dividend by 1.7% to 16.55 pence per share
Resilient profitability and strong cash flow generation

**EBITDA** \(^{(1, 2)} \text{£m} \)

**Operating cash flow** \(^{(1, 2, 3)} \text{£m} \)

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\(^{(1)}\) Company data as reported, excluding Precious Metals Processing

\(^{(2)}\) 2012 results have been restated as a result of IAS 19 (Revised) Employee Benefits

\(^{(3)}\) Cashflow from operations before interest and tax and after capital expenditure
Focused on delivering shareholder value

Focus areas for 2017

Continue

Revenue growth: China, India, Technical Services, innovation

Strengthen

Cash generation: payment terms, inventories, receivables

Deliver

Further margin progression: cost reduction, Lean, Excellence
Outlook

• Global market environment broadly stable at relatively low levels but with some encouraging early signs of improvement visible in recent months

• Vesuvius remains well placed to benefit from a recovery in end markets

• Continued focus on medium-term strategy:
  ▪ Building Technical Services business
  ▪ Growth in structural growth markets:
    • China, India, Mexico and Brazil

• Restructuring programme delivery continues and target savings further increased
  ▪ Annualised benefits of £35 million to be delivered by end of 2017

• Maintain focus on trading margin improvement, cash generation, balance sheet strength and shareholder returns
Q&A
Appendix
## 5 year history at constant currency\(^{(1)}\)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>1,529.8</td>
<td>1,502.1</td>
<td>1,547.2</td>
<td>1,452.9</td>
<td>1,401.4</td>
</tr>
<tr>
<td><strong>Steel(^{(2)})</strong></td>
<td>1,021.2</td>
<td>1,024.4</td>
<td>1,059.8</td>
<td>981.9</td>
<td>942.0</td>
</tr>
<tr>
<td><strong>Foundry</strong></td>
<td>508.6</td>
<td>477.6</td>
<td>487.3</td>
<td>471.0</td>
<td>459.4</td>
</tr>
<tr>
<td><strong>Trading Profit</strong></td>
<td>125.1</td>
<td>140.8</td>
<td>157.6</td>
<td>137.1</td>
<td>133.3</td>
</tr>
<tr>
<td><strong>Steel</strong></td>
<td>82.9</td>
<td>91.9</td>
<td>108.0</td>
<td>86.7</td>
<td>79.2</td>
</tr>
<tr>
<td><strong>Foundry</strong></td>
<td>42.1</td>
<td>48.8</td>
<td>49.6</td>
<td>50.4</td>
<td>54.1</td>
</tr>
<tr>
<td><strong>Margins</strong></td>
<td>8.2%</td>
<td>9.4%</td>
<td>10.2%</td>
<td>9.4%</td>
<td>9.5%</td>
</tr>
<tr>
<td><strong>Steel</strong></td>
<td>8.1%</td>
<td>9.0%</td>
<td>10.2%</td>
<td>8.8%</td>
<td>8.4%</td>
</tr>
<tr>
<td><strong>Foundry</strong></td>
<td>8.3%</td>
<td>10.2%</td>
<td>10.2%</td>
<td>10.7%</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

\(^{(1)}\)All numbers shown at December 2016 average exchange rates  
\(^{(2)}\)Steel includes Technical Services
Currency Ready Reckoner

**Rule of thumb for impact of a movement in currency against sterling (1 unit change)**

- Amounts shown are movements for each currency
- Works both for strengthening and weakening of currencies

<table>
<thead>
<tr>
<th>Currencies</th>
<th>Change</th>
<th>Approximate change in annual profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Dollar</td>
<td>1 cent</td>
<td>£0.4 million</td>
</tr>
<tr>
<td>Euro</td>
<td>1 cent</td>
<td>£0.3 million</td>
</tr>
<tr>
<td>Indian Rupee</td>
<td>1 rupee</td>
<td>£0.5 million</td>
</tr>
<tr>
<td>Chinese Renminbi</td>
<td>0.1 RMB</td>
<td>£0.5 million</td>
</tr>
<tr>
<td>Japanese Yen</td>
<td>1 yen</td>
<td>£0.1 million</td>
</tr>
<tr>
<td>Brazilian Real</td>
<td>0.01 BRL</td>
<td>£0.1 million</td>
</tr>
<tr>
<td>South African Rand</td>
<td>1 cent</td>
<td>£0.0 million</td>
</tr>
</tbody>
</table>
Market leading positions across many of our products

Molten metal in steel industry

- A world leader in flow control systems (slide gates)
- A world leader in isostatically pressed refractories
- A world leader in flow control pre-cast solutions
- A world leader in mould & tundish fluxes

Steel Flow Control Competitors

Molten metal in foundries

- A world leader in filters
- A world leader in feeding systems
- A world leader in coatings

Foundry Technologies Competitors

RHI
Sinoref
Krosaki Harima
TYK
OTYK
NPG Refractories Limited
Magnesita

Hamilton
ASK Chemicals
Vesuvius is focused on the Steel and Foundry markets

<table>
<thead>
<tr>
<th></th>
<th>Steel</th>
<th>Foundry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue (% of group)</strong></td>
<td>£506m</td>
<td>£459m</td>
</tr>
<tr>
<td><strong>Overview</strong></td>
<td>Provides products, systems and services to regulate and protect the flow of steel in the continuous casting process</td>
<td>Provides installation expertise and materials that withstand extreme temperatures and offer corrosion resistance at our customers’ facilities</td>
</tr>
<tr>
<td><strong>Products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nozzles</td>
<td></td>
<td>Filters</td>
</tr>
<tr>
<td>Tube Changers</td>
<td></td>
<td>Feeding Systems</td>
</tr>
<tr>
<td>Probes</td>
<td>Steel (100%)</td>
<td>Vehciles (40%)</td>
</tr>
<tr>
<td>Lasers</td>
<td>Steel (80%) Foundry (20%)</td>
<td>Other (55%)</td>
</tr>
<tr>
<td>Lining</td>
<td>Iron &amp; Steel (75%) Cement, HPI (25%)</td>
<td>Glass (5%)</td>
</tr>
<tr>
<td>Precasts</td>
<td>2,352</td>
<td></td>
</tr>
<tr>
<td><strong>End Markets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel (100%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundry (20%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron &amp; Steel (75%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement, HPI (25%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicles (40%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (55%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employees</strong></td>
<td>4,256</td>
<td>2,815</td>
</tr>
<tr>
<td>Sold under the Vesuvius brand</td>
<td></td>
<td>Sold under the Foseco brand</td>
</tr>
</tbody>
</table>

**Steel**
- Steel Flow Control
- Technical Services
- Advanced Refractories

**Foundry**
- Foundry Technologies

- Improves casting quality and foundry process efficiency through the supply of products and applications engineering to the global foundry industry.
Main products and markets – Steel business segment

Steel business segment overview

• World leader in the supply of consumable Steel Flow Control products used in the enclosed continuous casting process and a leading supplier of Advanced Refractories used as high temperature linings.

Steel business segment revenue by operating location 2016

- Vesuvius is the only truly global player in Flow Control
- Asia Pacific major volume growth potential
- Europe and NAFTA as laboratories for innovation

Well balanced presence in all major areas

A global leader for steel flow control consumable ceramics
Potential for growth

- Three heavily populated countries constitute considerable potential for growth
- All have low steel production tonnes per capita vs peers, indicating expected growth in infrastructure and construction development
  - India
  - Brazil
  - Mexico

China Steel Production: Has the limit been reached? Parallel with Japan

Steel production per capita in Japan 831kg

From 1956 to 1974 (18 years) steel production was multiplied 10x

Steel production per capita in China 581kg

From 1996 to 2014 (18 years) steel production was multiplied 8x
What is the steel profile of a maturing economy: The case of Japan

- Steel production per capita in Japan 831kg
- After the peak in 1973 steel production declined a little and recovered to about 88% of peak over 40 years
The Indian steel production high growth sequence should start soon

- Steel production per capita in India 70kg (vs 585kg in China)
- The long term steel growth episode should start in the coming three years and last longer than in Japan and China
- Official objective is 300 million tonnes in 2025
By directly comparing Chinese and Indian tonnages, India currently could be seen as being in the same situation as China in 1994; and still progress to 124mT in 2020 and 273mT in 2025.
Steel market growth scenario

- Nafta and Europe should decrease slowly as their economic growth model requires less steel
- China stabilises and starts declining at the end of the period
- India enters a major steel growth phase
- South America, Middle East and at the end of the period Africa enjoy sustained growth

Global forecasted production (MT)

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2020</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,629</td>
<td>1,775</td>
<td>2,050</td>
</tr>
</tbody>
</table>
Growth opportunities – Steel

Proportion of Flat Steel by Region

- Vesuvious serves mainly the flat products market which will grow at a higher pace than global steel as developing markets evolve towards consumption driven economies.
- Typical consumption of Flow Control products in flat steel is £1.5/T of steel vs £0.5/T of steel in long

Source MEPS
China’s move towards flat steel is confirmed

- Proportion of flat steel produced increased by 150bps YoY for Chinese Steel Association members (representing ~60% most advanced of total Chinese steel production)

- However, China Iron & Steel Association is the customer segment we address, already producing 56% of flat steel
Conversion to flat steel is a growth opportunity

- Progression of flat steel vs long steel could generate growth in our accessible market of 30% in 2020 and 55% in 2025.
- In the same period global steel production is expected to grow by only 10% and 28% respectively.
Steel vs Aluminium: Growth of high-strength steel continues along the previous trend

In vehicle production, conventional steel is replaced by high-resistance steels as well as by Aluminium

- High resistance steels require more sophisticated technologies to be produced (high Ni or Mn content) and tighter control on the process
- Today the most advanced steel makers suffer very low productivity on such qualities

Source: WSA for steel production volumes, Vesuvius internal data for Vesuvius sales at constant currency.
Steel vs Aluminum: Long term forecast gives the major share to high strength steels for light vehicles

- **2012**: 81% Mild and HSLA, 18% AHSS/UHSS, 1% Aluminium
- **2015**: 71% Mild and HSLA, 23% AHSS/UHSS, 6% Aluminium
- **2020**: 52% Mild and HSLA, 31% AHSS/UHSS, 17% Aluminium
- **2025**: 33% Mild and HSLA, 41% AHSS/UHSS, 26% Aluminium

Source: Ducker Worldwide
Main products and markets – Foundry business segment

Foundry casting process

- World leader in the supply of consumable products and technical services used in the production of metal castings which themselves have a wide variety of uses in engineered products

Foundry business segment revenue by operating location 2016

Ultimate end markets for castings

- Light Vehicles 27%
- Construction, Agriculture & Mining 18%
- Medium & Heavy Vehicles 12%
- General engineering 13%
- Other 10%
- Valves & Pumps 7%
- Power Generation 7%
- Railroad 4%
- Pipes & Fittings 2%

Source: Management estimates

A global leader in consumables for mould & methoding
Steel and Foundry casting production tonnages move in parallel. Growth perspectives should be similar: Foundry should benefit from China and India.

Source: WSA for steel production volumes; Modern Casting and Vesuvius estimates for casting tonnes.
Significant upside potential through continuing market penetration as emerging markets move towards higher quality foundry castings.
Shift of headcounts to emerging countries continued

NAFTA facilities and headcount

<table>
<thead>
<tr>
<th>Year</th>
<th>Facilities</th>
<th>Developed markets</th>
<th>Developing markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>744</td>
<td>1,760</td>
<td>1,357</td>
</tr>
<tr>
<td>2016</td>
<td>782</td>
<td>1,357</td>
<td>1,047</td>
</tr>
</tbody>
</table>

EU 15 facilities and headcount

<table>
<thead>
<tr>
<th>Year</th>
<th>Facilities</th>
<th>Developed markets</th>
<th>Developing markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>27</td>
<td>2,792</td>
<td>2,546</td>
</tr>
<tr>
<td>2016</td>
<td>20</td>
<td>2,546</td>
<td>2,395</td>
</tr>
</tbody>
</table>

Other EMEA facilities and headcount

<table>
<thead>
<tr>
<th>Year</th>
<th>Facilities</th>
<th>Developed markets</th>
<th>Developing markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>38</td>
<td>1,891</td>
<td>1,876</td>
</tr>
<tr>
<td>2016</td>
<td>29</td>
<td>1,876</td>
<td>1,760</td>
</tr>
</tbody>
</table>

South America facilities and headcount

<table>
<thead>
<tr>
<th>Year</th>
<th>Facilities</th>
<th>Developed markets</th>
<th>Developing markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>8</td>
<td>714</td>
<td>631</td>
</tr>
<tr>
<td>2016</td>
<td>11</td>
<td>1,047</td>
<td>916</td>
</tr>
</tbody>
</table>

Asia Pacific facilities and headcount

<table>
<thead>
<tr>
<th>Year</th>
<th>Facilities</th>
<th>Developed markets</th>
<th>Developing markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>36</td>
<td>1,098</td>
<td>635</td>
</tr>
<tr>
<td>2016</td>
<td>40</td>
<td>2,881</td>
<td>1,760</td>
</tr>
</tbody>
</table>

Source: Cognos, January 2017
Note: 2016 includes Sidermes, Ecil MET TEC, Process Metrix, not included in 2012 plants.
Financial Appendix
## H1 v H2 Performance – Constant Currency

<table>
<thead>
<tr>
<th>Dec '16 avg. rate / constant £m / (%)</th>
<th>2015/H1</th>
<th>2015/H2</th>
<th>2016/H1</th>
<th>2016/H2</th>
<th>H1’16 v H1’15</th>
<th>H2’16 v H2’15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Sales</td>
<td>757.3</td>
<td>695.7</td>
<td>705.9</td>
<td>695.6</td>
<td><strong>-6.8%</strong></td>
<td><strong>0%</strong></td>
</tr>
<tr>
<td>Gross Margin</td>
<td>204.7</td>
<td>182.9</td>
<td>193.2</td>
<td>189.7</td>
<td><strong>-5.8%</strong></td>
<td><strong>3.8%</strong></td>
</tr>
<tr>
<td>Trading Profit</td>
<td>75.4</td>
<td>61.7</td>
<td>63.0</td>
<td>70.3</td>
<td><strong>-16.5%</strong></td>
<td><strong>13.9%</strong></td>
</tr>
<tr>
<td>Gross Margin %</td>
<td>27.0%</td>
<td>26.3%</td>
<td>27.4%</td>
<td>27.3%</td>
<td>+40 bps</td>
<td>+100 bps</td>
</tr>
<tr>
<td>Trading Profit %</td>
<td>10.0%</td>
<td>8.9%</td>
<td>8.9%</td>
<td>10.1%</td>
<td>-110 bps</td>
<td>+120 bps</td>
</tr>
<tr>
<td>Restructuring Cost (as reported)</td>
<td>3.1</td>
<td>12.4</td>
<td>5.3</td>
<td>23.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Savings (as reported)</td>
<td>2.4</td>
<td>8.0</td>
<td>7.1</td>
<td>9.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TWC to Sales %</td>
<td>25.5%</td>
<td>26.3%</td>
<td>26.6%</td>
<td>26.6%</td>
<td>+110 bps</td>
<td>+30 bps</td>
</tr>
<tr>
<td>Net Debt</td>
<td>296.0</td>
<td>291.6</td>
<td>310.3</td>
<td>320.3</td>
<td><strong>+14.3%</strong></td>
<td><strong>+28.7%</strong></td>
</tr>
</tbody>
</table>

- H2 2016 performance in relation to past 18 months suggests trough has been reached
- Stable gross margins in 2016 and Trading Profit margins back to H1 2015 levels – both benefiting from restructuring
Resilience as a result of the restructuring

- Analysis of 4-year average of cost base and margins shows levels of Cost of Goods Sold (COG's); Opex as % sales; and Trading profit within a tight tolerance
- Provides basis of calculating the expected drop through once variable and fixed costs are identified
- Although dependent on mix, group 4-year average shows an expected 40% drop through
- Last 3 years shows achievement of drop through in year of sales growth and mitigation in years of sales contraction