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AMG at a Glance

Q2 2016 REVENUE

BY SEGMENT:
- 73% Critical Materials
- 27% Engineering

BY END MARKET:
- 39% Transportation
- 23% Specialty Metals & Chemicals
- 22% Infrastructure
- 16% Energy

BY REGION:
- 44% Europe
- 32% North America
- 20% Asia
- 4% ROW

AMG IS A GLOBAL SUPPLIER OF CRITICAL MATERIALS TO:
- ENERGY
- TRANSPORTATION
- INFRASTRUCTURE
- SPECIALTY METALS AND CHEMICALS

MARKET LEADING PRODUCER OF HIGHLY ENGINEERED SPECIALTY METALS AND VACUUM FURNACE SYSTEMS

- 3,000 Employees
- ~$1 billion Annual Revenues
- At the forefront of CO₂ Reduction
## AMG End Markets, Competitors and Customers

### Critical Materials

<table>
<thead>
<tr>
<th>Material</th>
<th>2015 Revenue</th>
<th>2015 EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>$757.5M</td>
<td>$60.8M</td>
</tr>
<tr>
<td>Aluminum</td>
<td>$219.7M</td>
<td>$14.8M</td>
</tr>
<tr>
<td>TAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chrome</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tantalum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanadium</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### AMG Engineering

<table>
<thead>
<tr>
<th>Units</th>
<th>2015 Revenue</th>
<th>2015 EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-Use Markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMG Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat Treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### AMG End Markets

- FLAME RETARDANTS
- AEROSPACE
- BATTERY ANODES
- EXPANDED POLYSTYRENE
- ALUMINUM ALLOYS
- SOLAR
- MICRO CAPACITATORS
- SUPER-ALLOYS
- INFRASTRUCTURE
- AEROSPACE
- AUTOMOTIVE
- CONSARC CORPORATION
- RETECH SYSTEMS LLC
- BODYCOTE PLC
- SECO/WARWICK S.A.

### AMG Competitors

- AMETEK, INC.
- IMERYS S.A.
- FERROGLOBE PLC
- MIDURAL GROUP
- ERAMET
- ELKEM
- LARGO RESOURCES LTD.
- SYRAH RESOURCES LTD.
- GLENCORE PLC

### AMG Customers

- Dupont
- Rio Tinto
- ArcelorMittal
- Sunpor
- POC
- Aleris
- Nucor
- Carpenter
- General Electric
- Rolls-Royce
- ThyssenKrupp
- Volkswagen
- BMW
- Ford

### AMG Engineering Units

- Engineering
- Heat Treatment
Key Investment Highlights

1) Attractive portfolio of critical materials with significant upside potential
2) Growth across diverse end markets driven by strong global regulatory and environmental trends
3) Leader in advanced technologies to address CO₂ reduction goals
4) Industry leading engineering division, focused on high-end aerospace and automotive applications
5) Portfolio effect results in stable earnings compared to industry peers
6) Consistent cash flow generation has delivered ample liquidity
7) Excellent platform for organic and acquisition-led growth
8) Highly accretive Lithium project
9) Deep bench of experienced management
Attractive Portfolio of Critical Materials

AMG Critical Materials
- Vanadium
- Titanium Alloys & Coatings
- Tantalum & Niobium
- Graphite
- Superalloys
- Aluminum Alloys
- Antimony
- Silicon

The cumulative average 10 year price appreciation of the AMG Portfolio was 6.4 percentage points higher than LME Metals and 6.8 points higher than oil, while the AMG EU Critical Materials outperformed LME Metals and oil by 5.9 and 6.3 percentage points, respectively.

CRITICAL MATERIAL PRICES OUTPERFORM THE LME

Note: Compound annual growth rates are calculated over the period Jun ’06 through Jun ’16 using the equation \((\text{Ending Value} / \text{Beginning Value})^{1 / \text{# of years}} - 1\) where ending value is avg monthly price in Jun ’16 and beginning value is avg monthly price in Jun ’06; and where AMG EU Critical Materials include Sb, Cr, Graphite & Si; AMG Portfolio includes Sb, Cr, FeV, Li, Nb, Si, Sr, Graphite, Ta, Sn & Ti; and LME Metals include Al, Co, Cu, Pb, Mo, Ni, & Zn. Avg annual growth rates (plotted above) are calculated over the same period using the equation \((\text{Ending Value} / \text{Beginning Value}) - 1\) and considering the same metal categorizations where ending value is avg monthly price in Jun of the given year and beginning value is avg monthly price in Jun ’06.
Attractive Portfolio – with Significant Upside Potential

Metal prices are measured on a scale of 0 to 10, with 0 and 10 representing the minimum and maximum average quarterly prices occurring during the past 10 years.

The positions demonstrate the current price level of each metal with respect to their various historical price points over the past 10 years.

AMG has significant potential upside within certain critical materials based on historical price ranges.

Note: Metal Positions are measured on a scale of 0 to 10, with 0 being the minimum price and 10 being the maximum price. They are calculated using the formula ([Jun '06 month avg – min. monthly avg] / [max. monthly avg – min. monthly avg] * 10) where maximum and minimum monthly averages are measured over the period 1 Jun ‘06 through 30 Jun ‘16.
AMG: MITIGATING TECHNOLOGIES
Products and Processes saving raw materials, energy and CO₂ emissions during manufacturing (i.e., recycling of Ferrovanadium)

AMG: ENABLING TECHNOLOGIES
Products and Processes saving CO₂ emissions during use (i.e., light-weighting and fuel efficiency in the aerospace and automotive industries)

AMG HAS DEVELOPED INTO A LEADER IN ENABLING TECHNOLOGIES

CO₂ REDUCTION
A GLOBAL IMPERATIVE FOR THE 21ST CENTURY

LEADER IN ADVANCED TECHNOLOGIES TO ADDRESS CO₂ REDUCTION
Syncrotherm®: Newly-developed one-piece flow heat treatment furnace system for automotive market

New furnace for **glass forming of critical components** in ultra-resistant glass for automotive and consumer markets

2015

Newly developed **plasma hearth melting furnaces for the recycling and reuse of titanium scrap** to several key customers in the aerospace industry

New, high-productivity **super alloy powder atomizer** with the world’s largest melting capacity
AMG’s portfolio of critical materials lessens its exposure to price volatility of a single metal, enabling more stable performance on a consolidated basis over time.

AMG Engineering has historically provided a further measure of earnings stability, given its lack of metal price exposure.

AMG’s combined production and engineering capabilities provide superior metallurgical know-how and market insight, enabling additional growth opportunities.

In contrast to AMG’s relatively stable financial performance, competitors who lack an diversified and integrated business model have experienced significant financial volatility through the most recent cycle.

---

1 EBITDA Volatility defined as annual variance from average EBITDA for years 2012-2016
2 Dedicated Miners: BHP, Vale, Newmont, Anglo American, Fortescue & Rio Tinto; data pulled from ThomsonOne
Consistent Cash Flow Generation, Delivering Ample Liquidity

**Operating Cash Flow** (in millions of US dollars)

- Q2 '16 cash flows from operating activities were $24.3M
- Cash flows from the first half of 2016 exceeded those from the first half of 2015 by 33%

**Net Debt** (in millions of US dollars)

- Net debt: $6.2 million
  - $188.0 million reduction of net debt since December 31, 2012
  - Net Debt to LTM EBITDA: 0.08x
- AMG’s primary debt facility is a $400 million multicurrency term loan and revolving credit facility
  - 5 year term (until 2021) with an accordion feature that allows the Company, subject to certain conditions, to increase the commitment amount by up to $100 million
  - In compliance with all debt covenants
AMG – Ready for Growth

**Cost Reduction**
Cost-reduction and capex discipline in response to global economic slowdown

**Supply Chain Excellence**
Competitive advantage through manufacturing and supply chain excellence, accelerating cost-reduction efforts

**Scaling Profitable Growth**
Properly positioned, financially and operationally, to pursue growth targets across portfolio

---

2012

**Product Mix Optimization**
Streamlined operations and improved operating performance by eliminating low-margin product lines

2013

2014

2015

2016 to 2020

**Targeted W/C & Debt Levels**
Further reduction in both working capital and net debt, strengthening the balance sheet
LITHIUM PROJECT
<table>
<thead>
<tr>
<th>Year Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 – 2013</td>
<td>AMG began development of a pilot plant process route for the flotation of Mica and Feldspar from tailings</td>
</tr>
<tr>
<td>2007 – 2008</td>
<td>Flotation equipment installed</td>
</tr>
<tr>
<td>2009 – 2010</td>
<td>Dry magnetic separator installed</td>
</tr>
<tr>
<td>2011</td>
<td>First set of samples produced and tested by industrial customer</td>
</tr>
<tr>
<td>2012</td>
<td>Electric rotate dryer was installed to enable batch trials for technical grade Spodumene</td>
</tr>
<tr>
<td>2013</td>
<td>AMG provided 43,603kg of spodumene to industrial customer to develop a tank test, following which pilot plant operations were halted</td>
</tr>
<tr>
<td>2015</td>
<td>The pilot plant received basic maintenance and wet magnetic separators were rented, placing the pilot plant back into operational condition</td>
</tr>
<tr>
<td>PHASE I – Lithium Concentrate</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>Monetization of substantial lithium mineral deposits currently residing in AMG Mineração's tailings ponds and tailing stockpiles.</td>
<td></td>
</tr>
<tr>
<td>AMG will construct a lithium concentrate (spodumene) production facility, co-located with AMG Mineração's tantalum mine and upgrading plant in Brazil.</td>
<td></td>
</tr>
<tr>
<td><strong>PLANNED PRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>90,000 metric tons per year of lithium concentrate, with an option to expand to 140,000 metric tons.</td>
<td></td>
</tr>
<tr>
<td><strong>STATUS</strong></td>
<td></td>
</tr>
<tr>
<td>Phase I capital investment of approximately $50M was approved by the AMG Supervisory Board on July 19th, 2016.</td>
<td></td>
</tr>
<tr>
<td>Lithium concentrate operations to commence in the first quarter of 2018.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE II – Lithium Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
</tr>
<tr>
<td>Downstream conversion of lithium concentrate into lithium hydroxide monohydrate and/or lithium carbonate.</td>
</tr>
<tr>
<td><strong>PLANNED PRODUCTION</strong></td>
</tr>
<tr>
<td>14,000 metric tons lithium carbonate equivalent (LCE) per year (hydroxide and/or carbonate), expandable to 20,000 metric tons.</td>
</tr>
<tr>
<td><strong>STATUS</strong></td>
</tr>
<tr>
<td>Affirmative scoping and site location studies completed.</td>
</tr>
<tr>
<td>Pre-feasibility study for the construction of a lithium chemical plant will be completed in the fourth quarter 2016.</td>
</tr>
</tbody>
</table>

AMG’s objective is to be the low-cost producer of spodumene globally.
AMG LITHIUM – PROJECT STRENGTHS

• Existing management and mining infrastructure – not a new mine project
• Strong understanding of the mine geology
• AMG Mineração’s last mineral resource estimate, published in 2013 and prepared in accordance with National Instrument 43-101 Guidelines, and endorsed and signed-off by Coffey, identified 19.3 million tons of measured, indicated and inferred resources, which includes tantalum, niobium, tin and lithium
• Mining infrastructure already in place and operational
• Ore extraction and crushing costs absorbed by profitable tantalum operation
• Lithium concentrate (spodumene) plant will be fed via lithium deposits in existing tailings, as well as incremental lithium-bearing tailings generated via tantalum production
  • 2.8 million metric tons of spodumene plant feed stock already extracted in the form of on-site tailings
• AMG has operated a spodumene pilot plant since 2010 (see slide 7)
• Phase 2 lithium chemical plant pre-feasibility work being performed by Hatch, the world’s leading builder of lithium plants
• Sample production of lithium concentrate for glass / ceramic industry

• Updated 43-101 compliant resource statement – life of mine extended

• Lithium concentrate (spodumene) plant studies completed Q4 2015 by Outotec
  - Conceptual study
  - Pre-feasibility study

• Spodumene plant basic engineering completed July 2016 by Outotec
  - AMG Supervisory Board approval July 19th, 2016
  - Spodumene plant construction to commence Q3 2016
  - Resource expansion drilling campaign to start Q3 2016
  - Spodumene plant construction to be completed Q4 2017

• Updated 43-101 compliant resource statement to be completed

• Spodumene plant to be at full capacity Q3 2018

PHASE I
2010-12
- Spodumene concentration processing route development
  - Mineralogical characterization on tailings from Ta2O5 plant
  - Laboratory scale flotation tests
  - Pilot plant operation
  - Industrial production scoping study

2013-14
- Sample production of lithium concentrate for glass / ceramic industry
  - Updated 43-101 compliant resource statement – life of mine extended

2015
- Lithium concentrate (spodumene) plant studies completed Q4 2015 by Outotec
  - Conceptual study
  - Pre-feasibility study

2016
- Spodumene plant basic engineering completed July 2016 by Outotec
  - AMG Supervisory Board approval July 19th, 2016
  - Spodumene plant construction to commence Q3 2016
  - Resource expansion drilling campaign to start Q3 2016

2017
- Updated 43-101 compliant resource statement to be completed
  - Spodumene plant construction to be completed Q4 2017

2018-20
- Spodumene plant to be at full capacity Q3 2018
LITHIUM INDUSTRY BASICS & BATTERY VALUE CHAIN

HARD ROCK → LITHIUM CONCENTRATE (SPODUMENE) → CHEMICALS → CATHODE PASTE → BATTERIES
**GLOBAL LITHIUM DEMAND AND PRICING OUTLOOK**

**FUNDAMENTALS**
Lithium-ion battery costs are falling rapidly as global battery producers expand manufacturing facilities.

Global lithium demand was 182k MT lithium carbonate equivalent (LCE) in 2015, with EV demand doubling YoY and accounting for 14% of global demand.

Global lithium supply has increased at a 7% compound average growth rate (CAGR) from 1995 to 2015 to meet increased demand from mobile phones and other electronics.

**PRICING OUTLOOK**
- **Rapidly growing market** driven by growth in electric vehicles and falling cost of production of lithium-ion batteries.
- **New production** Hard rock mining projects at higher cost.
- **Disjointed pricing** Chinese lithium hydroxide spot prices are currently estimated at US$19,315/MT with medium term forecasts around $10,000/MT (Roskill).

Source: Morgan Stanley
Transportation & Renewable Energy:
two key end markets driving long term growth,
with further upside potential

Renewable Energy (Grid Storage)
Driven by growth in renewable energy and
need for resources to provide system flexibility
and balance supply/demand

Global installed base of ~1.1 GW, projected
annual installations reaching up to >12 GW
by 2025 (Navigant Research)

Transportation
Fast-growing market for hybrids and electric
vehicles driven by regulations on CO2
emissions, falling battery costs, expanding
charging infrastructure and desire for an
enhanced driving experience

Consumer Electronics & Devices
Slowing demand for laptops and conventional
mobile phones are offset by robust demand
growth for smart phones, tablets and
wearables, driven by trend towards higher-
capacity batteries

Source: Roskill 2016 Lithium Market Report
LITHIUM ELECTRIC VEHICLE (“EV”) MARKET FORECAST

OVERVIEW

Global lithium carbonate market has been short of supply since 2013

It is estimated that there is ~6k MT of pure EV driven lithium demand today

Leading automakers are committing to developing a wider range of EV models which are more lithium-intensive than hybrid EVs or plug-in EVs

Lithium only accounts for 3% of battery costs

LIMITED EFFECT OF LITHIUM COSTS ON BATTERY PRICING

EV PENETRATION OF PRODUCTION

Source: Morgan Stanley
GLOBAL LITHIUM SUPPLY

FUNDAMENTALS

Global supply of lithium minerals has been historically dominated by large-scale lithium brine operations in South America.

Global lithium supply has increased at a 7% compound average growth rate (CAGR) from 1995 to 2015 to meet increased demand from mobile phones and other electronics.

2016 global lithium supply is around 164k MT LCE, split roughly 50:50 between hard-rock and brines.

LITHIUM SUPPLY BY COUNTRY (2015 ACTUAL)

- Chile: 37%
- Australia: 33%
- Argentina: 11%
- China: 10%
- US: 3%
- Brazil: 1%
- Zimbabwe: 2%
- Portugal: 2%

LITHIUM SUPPLY AND DEMAND OVER TIME

Supply: 99, 127, 114, 135, 126, 148, 124, 162, 136, 172, 146, 182, 164, 189, 177, 197, 185, 208
Demand: 99, 127, 114, 135, 126, 148, 124, 162, 136, 172, 146, 182, 164, 189, 177, 197, 185, 208

Source: Deutsche Bank

Source: Morgan Stanley
MARKET PRICE FORECASTS
– LITHIUM CONCENTRATE (SPODUMENE)

Source: Roskill 2016 Lithium Market Report
LITHIUM PRODUCER / PROJECT COST POSITION – LITHIUM CONCENTRATE (SPODUMENE)

Source: Roskill 2016, Ehren Gonzalez Ltda, Hatch; Note – Operating costs only, not including transportation
Note: AMG cost estimates per Outotec of $127/MT; includes production costs and SG&A costs; does not include cost of transportation to port

1 Greenbushes cost includes G&A but excludes selling expenses
2 Pilbara Minerals figure includes credits from tantalite production; includes transport and loading costs of $37/t concentrate

Estimate of AMG operating cost of $127/MT (excl. transportation)
Outlook for lithium consumption remains optimistic. Additional supply needed to feed strong demand in multiple markets.

**Demand**
Overall cumulative average growth rate (CAGR) from FY12 to FY25 of 6.4% (Base Case)
Battery demand CAGR of 12.6%
High Case – stronger global economy, surging demand for battery and energy applications – 9.5% per annum growth
1% increase in electric vehicle penetration would increase demand by 70k MT lithium carbonate equivalent (LCE) per year

**Supply**
Forecasted production is based upon current capacity, as well as publicly announced expansions

Source: Roskill 2016 Lithium Market Report
Note: new mine projects include Orocobre, Galaxy Resources, RB Energy, Lithium Americas/SQM, Eramet, Neometals, Nemaska Lithium, and Western Lithium.
History and Overview

The mine was founded in 1945 and acquired by Metallurg / AMG in 1978.

Activities include open pit mining, crushing/grinding, gravimetric and electromagnetic concentration.

Extract tantalum and niobium bearing ores and sells as tantalum concentrate.

Current production of 300k pounds of tantalum concentrate annually.

Present Product Lines

Tantalum concentrate sold exclusively to United States under long term contract.

Feldspar sold in local market to ceramics and glass producers.

Tin sold primarily in local market.

- Smelting of byproduct into tin metal occurs at third party operations.
RESOURCE EXPANSION – OBJECTIVES

• Update new resource in the west area of the mine, not included in 2013 resource statement
• Upgrade existing mineral resources from Inferred to Indicated and / or Indicated to Measured
• Exercise to be completed 1H 2017
FINANCIALS: Q2 2016
## Q2 2016 at a Glance

### AMOUNTS IN $M (EXCEPT EARNINGS PER SHARE)

<table>
<thead>
<tr>
<th></th>
<th>Q2 2016</th>
<th>Q2 2015</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVENUE</td>
<td>$248.3</td>
<td>$257.4</td>
<td>(4%)</td>
</tr>
<tr>
<td>GROSS PROFIT</td>
<td>$53.8</td>
<td>$44.6</td>
<td>20%</td>
</tr>
<tr>
<td>GROSS MARGIN %</td>
<td>21.6%</td>
<td>17.3%</td>
<td>25%</td>
</tr>
<tr>
<td>PROFIT BEFORE INCOME TAXES</td>
<td>$15.6</td>
<td>$8.3</td>
<td>88%</td>
</tr>
<tr>
<td>EBITDA</td>
<td>$26.0</td>
<td>$25.1</td>
<td>4%</td>
</tr>
<tr>
<td>EBITDA MARGIN %</td>
<td>10.5%</td>
<td>9.8%</td>
<td>7%</td>
</tr>
<tr>
<td>NET DEBT</td>
<td>$6.2</td>
<td>$41.9</td>
<td>(85%)</td>
</tr>
<tr>
<td>RETURN ON CAPITAL EMPLOYED (ROCE)</td>
<td>17.8%</td>
<td>15.7%</td>
<td>13%</td>
</tr>
<tr>
<td>NET INCOME ATTRIBUTABLE TO SHAREHOLDERS</td>
<td>$13.4</td>
<td>$3.8</td>
<td>253%</td>
</tr>
<tr>
<td>EARNINGS PER SHARE</td>
<td>0.48</td>
<td>0.14</td>
<td>243%</td>
</tr>
</tbody>
</table>

- Q2 ‘16 EBITDA up 4% versus Q2 ‘15 due to improved profitability within AMG Engineering
- Annualized ROCE increased to 17.8% versus 15.7% in Q2 2015
- Q2 ‘16 revenue declined by $9 million, or 4%, compared to Q2 ‘15, driven largely by weak metal prices
- Net debt: $6.2 million
  - $35.7 million reduction of net debt since Q2 2015
  - Net debt to LTM EBITDA: 0.08x

### INCREASES IN EARNINGS PER SHARE OF 243%, COMPARED TO Q2 2015
**Financial Data: ROCE & EBITDA**

**EBITDA (IN MILLIONS OF US DOLLARS)**

- **Q2 ’15:** $25.1
- **Q3 ’15:** $20.4
- **Q4 ’15:** $9.7
- **Q1 ’16:** $21.2
- **Q2 ’16:** $26.0

- **Q2 ’16 EBITDA up 4% versus Q2 ’15 due to improved profitability within AMG Engineering**

**ANNUALIZED ROCE**

- **2012:** 9.2%
- **2013:** 7.4%
- **2014:** 11.9%
- **2015:** 12.0%
- **Q2 ’15:** 15.7%
- **Q2 ’16:** 17.8%

- **Q2 ’16 ROCE improved to 17.8% from 15.7% in Q2 2015**
- **ROCE improvements are the result of efficient use of capital and improved profitability**
**AMG Critical Materials**

**REVENUE & EBITDA (IN MILLIONS OF US DOLLARS)**

- Q2 2016 revenue down $19.6 million, or 10%, vs. Q2 2015 due to double-digit declines in average quarterly prices of Nickel, Aluminum, Chrome, Niobium and Antimony.
- Q2 ‘16 EBITDA margin increased to 11.3% from 10.4% in Q2 ‘15.

**CAPITAL EXPENDITURES (IN MILLIONS OF US DOLLARS)**

- Capital expenditures increased to $6.2 million in Q2 2016 compared to $2.8 million in Q2 2015.
- The largest capital expansion projects are AMG’s Ancuabe graphite mine project and AMG TAC’s titanium aluminide expansion.
### AMG Critical Materials – Quarterly Revenue Drivers

<table>
<thead>
<tr>
<th>KEY PRODUCT</th>
<th>Q2 ‘16 REV ($M)</th>
<th>Q2 ‘15 REV ($M)</th>
<th>VOLUME</th>
<th>PRICE</th>
<th>CURRENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>FeV &amp; FeNiMo</td>
<td>$22.8</td>
<td>$28.1</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
<tr>
<td>Al Master Alloys &amp; Powders</td>
<td>$43.0</td>
<td>$45.7</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
<tr>
<td>Chromium Metal</td>
<td>$19.9</td>
<td>$20.5</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
<tr>
<td>Tantalum &amp; Niobium</td>
<td>$17.2</td>
<td>$23.8</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
<tr>
<td>Titanium Alloys &amp; Coatings</td>
<td>$21.1</td>
<td>$21.2</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
<tr>
<td>Antimony</td>
<td>$19.0</td>
<td>$24.9</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
<tr>
<td>Graphite</td>
<td>$16.4</td>
<td>$14.9</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
<tr>
<td>Silicon Metal</td>
<td>$22.4</td>
<td>$22.1</td>
<td>➩</td>
<td>➩</td>
<td>➩</td>
</tr>
</tbody>
</table>

- Double-digit declines in the average quarterly prices of Nickel, Aluminum, Chrome, Niobium and Antimony negatively affected revenue in the second quarter of 2016
- Strong sales volumes of Aluminum Master Alloys & Powders, Titanium Alloys & Coatings, and Graphite were partially offset by lower sales of Niobium and Antimony
- AMG’s ferrovanadium sales prices are indexed to the prior month’s average market price
AMG Engineering

**REVENUE & EBITDA** (IN MILLIONS OF US DOLLARS)

- Q2 2016 revenue up 19% vs. Q2 2015 due to strong sales of plasma remelting furnaces for the aerospace market
- EBITDA increased by $1.4 million in Q2 2016 versus Q2 2015, the highest quarterly EBITDA in twelve quarters due to higher levels of gross profit

**ORDER INTAKE** (IN MILLIONS OF US DOLLARS)

- AMG Engineering Order backlog of $158.8 million as of June 30, 2016, a 17% increase versus March 31, 2016
- AMG Engineering signed $92.8 million in new orders during the second quarter of 2016, a 1.39x book to bill ratio