year's first half) for sophisticated flat steel products due to excellent demand. Even more impressive than the revenue growth is the year-over-year increase in earnings. The operating result (EBITDA) thus climbed by 91.8% from EUR 230.8 million (margin of 13.0%) in the first half of 2016/17 to EUR 442.7 million (margin of 19.3%) in the completed first half of 2017/18 despite the negligible growth in unit sales. While the previous year's operating result was impacted by the start-up losses of the direct reduction plant in Texas, USA, as well as negative effects from blast furnace 5, which was operating at only reduced capacity, in the first half of the current year, the loss of the Texas plant's productive capacity in the wake of hurricane Harvey was the only negative factor that impacted earnings.

The period-to-period comparison shows that the profit from operations (EBIT) of the Steel Division even rose by 196.5% from EUR 97.1 million to EUR 287.9 million, more than doubling the margin from 5.5% to 12.5%.

The direct quarter-to-quarter comparison shows that, compared with the excellent performance in the business year's first quarter, the upward trend weakened only a bit in the second quarter of 2017/18; aside from the hurricane-induced plant shutdown in Texas, this stems mainly from seasonal effects (major customers' regular summer plant closures). Against this backdrop, revenue fell by 10.5% from EUR 1,213.3 million in the first quarter of 2017/18 to EUR 1,085.5 million in the second quarter. The operating result (EBITDA) declined at the same time by 5.7% from EUR 227.8 million to EUR 214.9 million. However, the lower revenue caused the EBITDA margin to improve from 18.8% to 19.8%. The quarter-to-quarter comparison shows that EBIT fell by 8.3% from EUR 150.2 million (margin of 12.4%) in the first quarter of 2017/18 to EUR 137.7 million (margin of 12.7%) in the second quarter.

At 10,905 employees, the number of employees (FTE) in the Steel Division at the end of the first half of 2017/18 was marginally lower than the number (10,928) in the same period of the previous business year but marginally higher than the number (10,898) at the end of the previous business year.

HIGH PERFORMANCE METALS DIVISION

QUARTERLY DEVELOPMENT OF THE HIGH PERFORMANCE METALS DIVISION

In millions of euros	Q 1		Q 2		H 1		
	2016/17 04/01–06/30/2016	2017/18 04/01–06/30/2017	2016/17 07/01–09/30/2016	2017/18 07/01–09/30/2017	2016/17 04/01–09/30/2016	2017/18 04/01–09/30/2017	Change in %
Revenue	667.1	739.3	638.9	692.1	1,306.0	1,431.4	9.6
EBITDA	99.2	127.4	94.3	99.1	193.5	226.5	17.1
EBITDA margin	14.9%	17.2%	14.8%	14.3%	14.8%	15.8%	
EBIT	63.4	89.6	58.2	62.6	121.6	152.2	25.2
EBIT margin	9.5%	12.1%	9.1%	9.0%	9.3%	10.6%	
Employees (full-time equivalent)	13,507	13,823	13,573	13,950	13,573	13,950	2.8

MARKET ENVIRONMENT AND BUSINESS DEVELOPMENT

The High Performance Metals Division operated in a largely positive market environment in the first half of 2017/18. However, the division's very solid earnings trend stems not just from external factors, but also from its consistent focus on products with unique selling propositions in both technological and qualitative terms as well as the continuous expansion of its service organization.

Aside from the pleasing development of the market, the tool steel segment—products especially for the customer segments, automotive and consumer goods industries—also benefitted from the further improvement in its product mix, which results above all from a higher share of remelted products and those that are manufactured using a powder-metallurgical process. The uptick in orders in the oil and gas segment, which had already made itself felt in the previous period, continued. Internationally, the push to launch projects aimed at developing additional oil and gas deposits intensified even though oil prices remain low. This is due not least to new exploration technologies that enable the economically feasible development of new resources in spite of the still relatively low oil price. Given the more recent withdrawal of some distributors from the oil and gas business, the division's worldwide on-site presence is proving to be an increasingly distinguishing feature relative to the competition, particularly in this situation. In the aerospace industry segment, model changes have currently led to occasional and slight delays in deliveries of forged products, but this does not affect the positive development overall of the aerospace sector. However, there is still no sign of a recovery in the European energy engineering market. As there are no significant new power plant construction projects in this segment, business activities are limited to the maintenance of existing plants.

Regionally, the High Performance Metals Division—just as the Group on the whole—benefits above all from the economic recovery in Europe, which continues unabated. In sectoral terms, the positive development stems especially from the improved economic environment in the oil and gas sector, and there has been a clear revival of demand in this segment particularly in North America. The upturn in tool steel, by contrast, was accompanied by buyers' increasingly volatile behavior. In South America, especially Brazil, the economy stabilized on a low level compared with the previous year not least due to intensifying export activity that is being driven by positive foreign currency effects. Internally, the division's performance benefitted above all from far-reaching measures aimed at boosting efficiency as well as the development of new business opportunities, first and foremost, in the additive manufacturing segment. In the main growth market China, the leading position with respect to high-performance metals incl. services for sophisticated tools with a focus on the automotive and consumer goods industries was expanded. The market environment in Asia is satisfactory overall.

In manufacturing, capacity utilization in the first half of 2017/18 rose yet again due to the solid development of demand especially for premium products. The decision to build the world's most advanced special steel plant in Kapfenberg, Austria, was taken in late September 2017 (investment volume of EUR 330 million to EUR 350 million, start-up in 2021). Thanks to a number of strategic investments, the Value Added Services business segment succeeded in expanding its global market leadership in the first half of 2017/18. Here, it is particularly the focus on the ability to make deliveries on short notice that leads to greater customer loyalty. The establishment of sites in both Taiwan and Canada expanded the international additive manufacturing network.

FINANCIAL KEY PERFORMANCE INDICATORS

In a period-to-period comparison, the positive market environment led to significant improvements in the division's key financial performance indicators. Besides the expansion by about 4% of the delivery volume compared with the same period of the previous year, prices were raised and the product mix was improved. In turn, this resulted in a 9.6% increase in revenue from EUR 1,306.0 million in the first half of 2016/17 to EUR 1,431.4 million in the first half of 2017/18, which gave the earnings figures a substantial boost in the current business year as well. The operating result (EBITDA) climbed by 17.1% from EUR 193.5 million in the first half of 2016/17 to EUR 226.5 million in the first half of 2017/18. As a result, the EBITDA margin improved from 14.8% to 15.8%. The profit from operations (EBIT) rose by 25.2% in the same period, specifically, from EUR 121.6 million (margin of 9.3%) to EUR 152.2 million (margin of 10.6%).

A quarter-over-quarter comparison shows that revenue fell by 6.4% from EUR 739.3 million in the first quarter to EUR 692.1 million in the second quarter. This development is largely due to the lower price environment that stems from declining alloy costs, whereas delivery volumes remained stable despite the summer quarter. However, the second quarter was buffeted nonetheless by a substantially lower level of manufacturing activity on account of planned maintenance

work. Against this backdrop, the operating result (EBITDA) fell by 22.2% from EUR 127.4 million (margin of 17.2%) to EUR 99.1 million (margin of 14.3%). Likewise, EBIT declined in the same period, specifically, by 30.1% from EUR 89.6 million (margin of 12.1%) to EUR 62.6 million (margin of 9.0%).

At 13,950 employees, the number of employees (FTE) at the end of the first half of 2017/18 exceeded the number (13,573) in the same period of the previous business year by 2.8% and the number (13,733) at the close of the previous business year by 1.6%. The rising number of employees stems primarily from the division's expansion in the Value Added Services segment.

METAL ENGINEERING DIVISION

QUARTERLY DEVELOPMENT OF THE METAL ENGINEERING DIVISION

In millions of euros	Q 1		Q 2		H 1		
	2016/17 04/01–06/30/2016	**2017/18** 04/01–06/30/2017	**2016/17** 07/01–09/30/2016	**2017/18** 07/01–09/30/2017	**2016/17** 04/01–09/30/2016	**2017/18** 04/01–09/30/2017	**Change in %**
Revenue	680.4	770.0	652.1	741.2	1,332.5	1,511.2	13.4
EBITDA	87.6	87.2	84.4	90.5	172.0	177.7	3.3
EBITDA margin	12.9%	11.3%	12.9%	12.2%	12.9%	11.8%	
EBIT	49.7	47.0	45.8	34.4	95.5	81.4	–14.8
EBIT margin	7.3%	6.1%	7.0%	4.6%	7.2%	5.4%	
Employees (full-time equivalent)	12,606	13,274	12,709	13,450	12,709	13,450	5.8

MARKET ENVIRONMENT AND BUSINESS DEVELOPMENT

The performance of the customer segments that are most important to the Metal Engineering Division was largely restrained during the first half of 2017/18. The railway systems segment, in particular, which accounts for more than one half of the division's revenue, was confronted with weaker demand for longer stretches in most sales regions. Yet even the oil and gas sector was still a ways off from a dynamic, across-the-board recovery in the first half of 2017/18 despite the satisfactory volume market. By contrast, demand from the automotive industry remained robust in the first six months of the current business year as well.

Demand in the Rail Technology business segment had already started to slump during the previous year and remained at a low level even in the first six months of 2017/18. In the year's first half, the core market, Europe, continued to be characterized by very modest maintenance investments overall; at the same time, the mining regions of Australia and Brazil produced very little momentum. The mass transit projects in the Middle East also experienced delays due to crude oil prices. Thanks to its strong market position and global diversification, the Turnout Systems business segment succeeded in using its strengths in individual regions to offset market weaknesses in others. While awards for project contracts in Europe, for example, were few and far between, just as in the railways segment, the business segment benefitted from very good demand in China for high-speed turnouts. In North America, the turnout business that is dominated by heavy-haul transports showed slight signs of recovering, whereas the momentum towards implementation of railway infrastructure measures in the mining countries Brazil, Australia, and South Africa remained moderate.

The Wire Technology business segment successfully closed the first half of 2017/18 with the start-up of the new wire rod mill, with the result that