Markets

Revenues from the aerospace and defence markets decreased 0.6% (at constant exchange rates). The Group saw good growth in civil aviation in the UK and France, notably related to engine programmes. However, demand in the North American market was 4.9% lower (at constant exchange rates) mainly due to reduced requirements for business jets. Revenues in the defence sector saw some improvement and were 0.3% ahead of the same period last year (at constant exchange rates).

As expected, revenues from the energy sector were very weak, driven by a further significant decline in demand from the oil & gas sector, which was down 47.6% year on year (at constant exchange rates). This impacted not only Classical Heat Treatment but also two of the Group's Specialist Technologies, HIP PF and Surface Technology. Revenues to industrial gas turbine and other energy sectors were broadly flat. In total, revenues across all energy sectors were down 34.3% (at constant exchange rates) compared to the first six months of 2015.

Demand from the car and light truck sector continues to be robust in all geographies and was aided by increases in recently-won new programmes, especially for the Group's Specialist Technologies. Revenue growth was 3.1%[1] (at constant exchange rates) when compared to the first half of last year.

Demand in the heavy truck market was weak in both North America and Europe. Revenues to the sector were down 15.2%[1] year on year (at constant exchange rates).

There has been continued widespread softness in industrial production in both North America and Western Europe and to a lesser extent in the emerging markets. The impact has been felt widely in the general industrial business, most notably in reduced demand for a wide variety of industrial machinery, particularly large capital equipment, affecting both new build and aftermarket. Overall, general industrial revenues were down 5.0%[1] (at constant exchange rates) in comparison with the first half of 2015.

Growth in the emerging markets was good, particularly due to increasing revenues from the automotive sector, reflecting the Group's continuing investment in these territories in support of new programme opportunities. Overall, Group revenues in these territories were up 14.4%[1] (at constant exchange rates).

Business review

	Half year to 30 June					
	Revenue		Headline operating profit		Headline operating margin	
	2016 £m	2015 £m	**2016 £m**	2015 £m	**2016 %**	2015 %
ADE	**121.9**	128.8	**27.4**	31.5	**22.5**	24.5
AGI	**169.1**	171.0	**27.9**	27.6	**16.5**	16.1
	291.0	299.8	**55.3**	59.1	**19.0**	19.7
Central costs	**–**	–	**(6.0)**	(5.0)	**–**	–
Total	**291.0**	299.8	**49.3**	54.1	**16.9**	18.0

Aerospace, Defence & Energy (ADE)

Revenues for the ADE business were £121.9m in the six months to June 2016 compared with £128.8m in 2015, a decrease of 5.4%. At constant exchange rates revenues decreased 10.4%, driven by a 48% year-on-year reduction in sales to the oil & gas sector.

Headline operating profit[2] was £27.4m (2015: £31.5m), a decrease of 13.0%, comprising an organic decline of 18.0% and a 5.0% increase resulting from favourable foreign currency movements. The headline operating margin fell from 24.5% to 22.5%. Despite reduced levels of trading, the Group's energy business continues to achieve high single-digit margins. Profitability has been maintained in other sectors.

Net capital expenditure was £10.3m (2015: £6.3m), representing a spend rate of 1.0 times depreciation (2015: 0.7 times). Notable projects include expansion of aerospace-focused heat treatment capacity in USA and France.

Average capital employed for the period was £242.7m (2015: £231.1m).

Automotive & General Industrial (AGI)

Revenues for the AGI business were £169.1m in the first half of 2016, compared with £171.0m in 2015, a decrease of 1.1%. Revenues decreased 6.3% at constant exchange rates as a result of widespread weakness in industrial production and, in particular, in capital equipment.

Headline operating profit[2] was £27.9m (2015: £27.6m), an increase of 1.1%, made up of organic decline of 5.4% and a 6.5% increase due to favourable foreign currency movements. Headline operating margin improved from 16.1% to 16.5%.

Net capital expenditure was £16.6m (2015: £20.5m) representing a spend rate of 1.1 times depreciation (2015: 1.3 times). The Group continues to invest in its Specialist Technologies and other high value-added processes in developed markets and in additional greenfield capacity in Mexico.

Average capital employed for the period was £325.8m (2015: £296.3m).

1 Excluding closed sites and the business in Brazil, which was sold in the second half of 2015.
2 Headline operating profit is reconciled to operating profit in note 2. Bodycote plants do not exclusively supply services to customers of a given market sector (see note 2).