CASE STUDY

DESIGN UPGRADE ENSURES CONTINUITY OF OPERATION

- 60% cost saving compared to new pump purchase
- Pump interchangeability minimizes downtime
- Operating characteristics matched to process requirements

CHALLENGE

The customer operated three BB1 pumps for a steam cracking process, two pumps were in service and one spare. When one of these pumps failed, they opted to replace it with another, unused BB1 pump available on site. However, this fourth pump had different design and duty characteristics. The customer asked us to make the necessary modifications to guarantee the interchangeability of the rotor between all the pumps.
SOLUTION

Our Aftermarket Services team undertook a thorough design review. It transpired that major design modifications would be required to meet the customer’s requirements for interchangeability.

The solution was to completely redesign the bearing housings and introduce new seals. This, in turn, required machining of the pump casing and the volute to match design clearances and accommodate the maximum diameter of the impeller.

OUTCOMES

The additional pump is available to be used on the steam cracking process in line with the original characteristics. The customer therefore continues to have a spare pump available, which will minimize downtime in the event of a pump failure. The cost of upgrading the additional BB1 pump was more than 60% cheaper than buying a brand new unit.