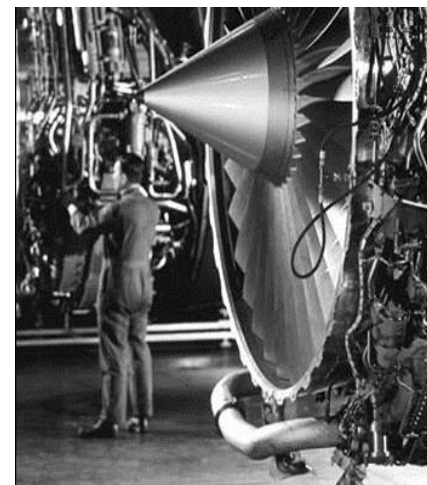


AEROSPACE (USA)

ENGINE MANUFACTURING

Castrol Techniclean® MP Flex*

ANNUAL SAVINGS: \$311,635



THE SITUATION

A major aerospace engine manufacturer uses specialty metals for manufacturing of components. These specialty metals are high-cost materials, and had high associated scrap costs. These metal chips were heavily oiled, and had to be disposed of rather than recycled into new product.

BEFORE

- Heavily oiled chips had to be disposed of
- Waste disposal cost of chips \$0.45/Lb
- Cost to purchase replacement metal \$6.50/Lb

AFTER

- Chip disposal savings: \$19,369
- Elimination of make-up fluid savings: \$292,266
- Reduced overall waste disposal

THE SOLUTION

- Dedicated on-site Castrol engineering staff worked with technical support and the customer to determine the primary cause.
- A drum of heavily oiled chips were cleaned in Castrol Techniclean MP Flex. The cleaned chips were sent to an outside vendor for inspection of any processing issues.
- No oil residue was observed on the chips.
- Cleaning the chips in-house eliminated the need to purchase replacement material.

- Castrol utilizes best practice to improve customer process.
- Using on-site engineering expertise to provide accurate recommendations

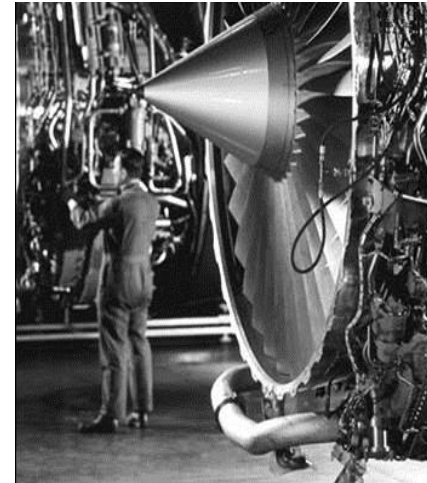
RECOMMENDATIONS

From past experience and extensive product knowledge, Castrol recommended cleaning the heavily oiled chips in a 3-5% solution of Castrol Techniclean MP Flex.

Castrol Techniclean MP Flex is an alkaline cleaner suitable for heavy-duty cleaning applications.

CONCLUSION

In-house cleaning of the chips led to reduced waste disposal and eliminated the volume of make-up metal that needed to be purchased—leading to a **total savings of \$311,635.**



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