

DEWATERING & IN-PROCESS CORROSION PROTECTION

FERROCOTE 380

INTRODUCTION

A leading bearing manufacturer was working on a new process to improve surface finish on certain components, which would improve the service life of the bearings.

However, some highly corrosive chemicals were used during the operation that caused severe corrosion on the finished parts after only a few minutes. Several solutions were tested and while some were partially successful, corrosion still occurred in some cases. One or two subsequent steps seemed necessary to obtain the desired target of corrosion-free production. At this point, Quaker was contacted to discuss the process and problems the manufacturer was having.



IMPACT

Quaker developed a custom-made corrosion preventive for the customer in less than two months. The new product, FERROCOTE 380, was able to do the following:

- Completely remove the corrosive chemicals
- Remain stable in the presence of those chemicals for a long period of time
- Avoid corrosion if any trace was left behind
- Provide corrosion protection for a few months of in-process storage

The introduction of FERROCOTE 380 has simplified the manufacturer's process and saved them thousands of dollars in chemical costs and reduced scrap rates.

PROCESS & EQUIPMENT INFORMATION

Operation:	Confidential
Material:	Steel
Part Produced:	Bearing components
Function:	Dewatering
Applications:	Immersion

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PRODUCT DESCRIPTION

FERROCOTE 380 is a very efficient dewatering fluid, compatible with a wide array of chemicals, including strong, inorganic oils. It should be used neat to remove water and corrosive chemicals from the metal, while providing short-term corrosion protection.

FERROCOTE 380 has a VOC content of 1%, low odor and a very high flash point. It is free of barium, heavy metals and chlorinated and aromatic solvents. The product leaves an extremely thin film, making it very economical to use. FERROCOTE 380 is very effective on avoiding white rust on galvanised surfaces, and its thin layer does not need to be removed for most of the common downstream operations.

COST-BENEFIT ANALYSIS

Metalworking lubricants represent a very minor part of the costs in a metalworking process, typically less than 1%. This case illustrates the importance of correct fluid selection. The impact of the fluid can be a multiple of its costs, making the price of a metalworking fluid insignificant.

During the development of certain manufacturing processes where chemicals are involved, it is a very effective practice to involve the in-house expertise of companies such as Quaker into the development stage. A well designed process fluid can save entire process steps and shave months off process development. That's why Quaker focuses on developing fluids with the highest performance without compromise, fluids that sharpen your competitive edge.

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