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## **Experimental studies to analyse the effect of using corrosion inhibitors on cooling curve behavior of soya bean oil based quenchant**

**Danial and Ignatius**

### **Abstract**

The authors made experimental studies to analyse the effect of using corrosion inhibitors on cooling curve behavior of soya bean oil based quenchant. They observed that the inhibitors exhibited considerable cooling time and rate of corrosion. Based on the experimental work the authors have drawn the following conclusions. The relative inhibitory effect of a series of common yellow-metal (brass) corrosion inhibitors was studied potentiodynamically in a saline solution. The effect of this same series of corrosion inhibitors formulated in soybean oil on cooling curve performance was determined under nonagitated conditions using ASTM D6200 test procedure. The results of this study showed that all of the corrosion inhibitors examined could potentially exhibit substantial cooling time and rate reduction. The magnitude of this effect was corrosion inhibitor specific. Further work is required to define the nature (structure and thickness) of the films formed on the metal surface and to relate this data to the cooling rate.