

# **PROCESS TECHNOLOGY**

# **...IN PHOSPHATE COATINGS**

Phosphate coating processes provide some of the more difficult challenges in heating. Phosphate coatings are used extensively on lubricated metal parts to provide a thick, porous layer and a grain structure for oil to reside to improve lubricity for gears and threads while protecting against corrosion. D&L Oil Tools in Tulsa, Oklahoma, does their own phosphate coatings in order to ensure a quality finish on their down-hole parts used for oil and gas drilling.

During the phosphate process, a coating builds up on heated surfaces such as electric immersion heaters, restricting heat transfer, causing corrosion and shortening heater life. For this reason, Process Technology developed a purpose-built heater for phosphate chemistries: the DAS-series immersion heater. The DAS-series heaters are designed to last longer in heavy buildup and surface corrosion that normally occurs in these baths. A heavy-wall outer sheath and unique internal construction protects the heater core resulting in a longer life and better performance in harsh phosphate applications. Since D&L Oil Tools replaced their standard immersion heaters (which tended to last about a year) with DAS heaters, *they haven't suffered a single heater failure after seven years of service.*

**The DAS heaters have reduced D&L's cleaning intervals from every week to every six weeks. Today, D&L wouldn't consider using anything else for heating their phosphates!**



<http://www.processtechnology.com/phosphate-heaters.html>

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