



Casting Drum Re-shell

Problem:

A customer in the plastic film industry was experiencing hot and cold spots on the surface of a cooled casting drum causing inferior quality product with variations in material thickness and clarity.

Solution:

PFE Rolls diagnosed the casting drum as having poor fluid flow that was resulting in localized, poor heat transfer. The fluid flow was being restricted by corrosion of the internal passages and a build-up of sludge from untreated cooling water.

The outer shell was removed from the roll while saving the shafts and internal structure of the roll. All exposed internal flow passages were thoroughly cleaned and built up to the proper diameter. A new outer shell of rolled and welded steel was bored inside to achieve a uniform wall thickness. The new outer shell was then heat-shrunk onto the internal assembly and welded in place.

To prevent future corrosion of the internal flow passages, the completed, welded assembly was acid flushed and electroless nickel plated.

The outer surface of the casting drum was chrome plated, ground and super finished to a 0 – ½ micro-inch Ra surface finish with T.I.R. and straightness within .0005".

All of the above was performed at a cost approximately one quarter of the price of a new casting drum.