

LETTERS TO THE EDITOR

Dyeing of wet heat resistant leather with chrome mordant dyes

In earlier communications application of "ladder link"* in chrome tanning for achieving a real break-through in wet heat resistance of chrome and semi-chrome leathers and in making softy leathers with required amount of fullness and tightness of grain was reported^{1,2,3} by the application of "ladder link" chrome or semi chrome leathers were made to withstand wet heat of boiling water for a period of two hours while conventionally made chrome tanned leathers shrink within 20 minutes of exposure to boiling water. One of the benefits of improved wet heat resistance is the possibility of dyeing at boiling point of water.

Conventionally-made chrome leathers are seldom dyed with chrome mordant dyes, since these dyes in the presence of chrome will produce deeper and faster shades on the substrate, only when the temperature of the dye bath is more than 90°C. The improved wet heat resistance of chrome leather treated with "ladder link" made it possible for dyeing leather with chrome mordant dyes at elevated temperature (> 90°C) for obtaining deeper and faster shades. The chrome mordant dye "Omega Chrome Brown EB" (Sandoz India) was chosen, as this dye can also be used as 'direct' dye for dyeing leather; this affords the comparison of dyeing as such and by chrome mordanting technique.

Crust of wet heat-resistant chrome leather pieces were soaked overnight in water in the presence of ammonia and a non-ionic wetting agent, washed well with water in Walker drum and refatliquored with "Lipoderin II" (4%) in hot water (60°C) in the drum. After half an hour drumming, the solution of Omega Chrome Brown EB was fed into the same drum and drummed for 45' after which period dichromate was added to the bath and the temperature of the dye bath rapidly raised to 90-95°C. Leathers were drummed in the dye bath for half an hour at this temperature; the temperature of the dye bath was then brought down to 60' and treated with acetic acid for fixing the fatliquor. Leathers were piled overnight. Next day they were washed for removing the free dichromate, set, dried, staked and dry drummed.

The leathers dyed with chrome mordanting technique has darker, faster shade as compared to the leather dyed with the same dye without mordant at 60°C; the leather thus dyed also has better wash fastness.

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REFERENCES

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*product developed by CLRI.