Dyeing Technology Developments

2011 iMaster H2O2000 (or similar) eco-soft plus2011 Then-Airflow® SYN 600 G22000 (or similar) Then-Airflow® AFE 450Applicationsbleaching, dyeing discontinuousbleaching, dyeing, softeningbleaching, dyeing, softeningDye methoddiscontinuousdiscontinuousdiscontinuousTechnologyjetjetaerodynamicFiberscotton, viscose, polyester, blendscotton, viscose, polyester, blendscotton, viscose, polyester, blendscotton, viscose, polyester, polyamide, blendscotton, viscose, polyester, polyester, polyamide, blendscotton, viscose, polyester, polyester, polyamide, blendscotton, viscose, polyester, polyester, polyamide, blendscotton, viscose, polyester, polyamide, blendscotton, viscose, polyester, polyamide, blendscotton, viscose, polyester, polyamide, blendscotton, viscose, polyamide, blends
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store (kg)knitwearknitwearwoven or knitwearwoven or knitwearMaximum number of fabric stores8866Liquor ratio: natural fibers1:3.71.61:3.51:4
Liquor ratio: natural fibers 1:3.7 1.6 1:3.5 1:4
Liquor ratio: man-made fibers 1:3 1:5 1:2.2 1:2.5
Rinsing time (minutes)60-180120-300cellulosics: 60-90cellulosics: 60-90depending on shademan-made: 12-20man-made: 12-20
Total energy consumption0.03-0.28N/A18-2218-22(kw/kg of fabric)(kw/hour)
Self-cleaning filter system Yes No Yes No
Total water consumption17-5040-100cotton: 38-45cotton: 45-54(I/kg)man-made: 18-22man-made: 24-28
Total production time (minutes)120-480180-600cotton: 280-360cotton: 280-360depending on substrate, shade depthman-made: 210-260man-made: 210-260

Table I

Source: Thies GmbH and Fong's Europe GmbH