WINDING SYSTEM TECHNOLOGY

References & Orders List

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|--|
| ITALY | Study, design, construction and installation of rewinder for crepe paper at wet, speed 1200 m/min. |
| ITALY | Study, design, construction and installation of rewinder for dry paper |
| ITALY | Study, design, construction and installation of 3 plies combining rewinder for tissue paper, speed 1600 m/min. |
| URUGUAY | Study, design, upgrade, rebuild and installation of a second hand 2 plies combining rewinder for tissue paper, speed 1200 m/min. |
| ITALY | Study, design, construction and installation of rewinder for Fluting and Test Liner paper, speed 1800 m/min. |
| EGYPT | Study, design, construction and installation of 3 complete unwinding stands for tissue paper rewinder and the complete new electronic control system plant, speed 1400 m/min. |
| EGYPT | Study, design, construction and installation the upgrade for the head tissue rewinder and the complete new electronic control system plant, speed 1000 m/min. |

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|--|
| MEXICO | Study, design, construction and installation of 2 plies combining and rewinder for tissue paper, with Shaft Puller, up-ender for jumbo reel and automatic core loading system, speed. 1000 m/min. |
| COLOMBIA | Study, design, construction and installation of 2 plies combining and rewinder for tissue paper, with Shaft Puller, up-ender for jumbo reel and automatic core loading system, speed 1000 m/min. |
| EGYPT | Study, design, construction and installation of 4 plies combining tissue rewinder, speed 1400 m/min., with calender unit. |
| EGYPT | Study, design, construction and installation of 2 complete unwinding stands for tissue paper rewinder and the complete new electronic control system plant, speed 1000 m/min. |
| EGYPT | Study, design, construction and installation of 1 calender unit for tissue rewinder speed 1300 m/min., and the complete new electronic control system plant. |
| HUNGARY | Shaft Puller for rewinder, with new electronic control system plant. |
| POLAND | Study, design, construction and installation of 2 plies combining tissue rewinder, speed 1600 m/min |
| ITALY | Study, design, construction and installation of new unwinder for test liner and fluting and up grade on the head rewinder for a new working speed from 1700 m/min. to 2400 m/min. |
| FRANCE | Study, design, construction and installation of 1 complete unwinding stands (fourth unwinding) for tissue paper rewinder and the complete new electronic control system plant, speed 2000 m/min. |

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|--|
| BULGARIA | SPECIAL SOLUTION: Study, design, construction and installation of 2 plies combining Tissue slitter rewinder, and MG Paper and Kraft rewinder, speed 1800 m/min, width 4400 mm, with complete handling system and wrapping system Study, design, construction and installation of pope reel, with automatic spools loading system, speed 800 m/min, width 4400 mm, Tissue, M.G. paper 15÷40 gsm and Kraft paper 40÷125 gsm |
| INDONESIA | SPECIAL SOLUTION: Study, design, construction and installation of TWO slitter rewinder, 2 plies combining tissue winder and one ply MG Paper 13- 32 gsm , speed 1600 m/min |
| EGYPT | Study, design, construction and installation of one automatic shaft handling system and handling reel system for the existing tissue slitter rewinder. |
| ITALY | Study, design, construction and installation of one pope reel for crepe papers at wet and kraft, speed 500 m/min. |
| INDONESIA | Study, design, construction and installation of 1 calender unit for tissue rewinder speed 1500 m/min., and the complete new electronic control system plant. |
| BELARUS | Study, design, construction and installation of one slitter rewinder, 2 plies combining tissue winder, speed 1600 m/min |
| ITALY | Study, design, re-construction of one Jagenber slitter rewinder, new drive speed 2000 m/min. and DCS Scalink |
| ITALY | Up-grade of one slitter rewinder, 3 plies, speed 1600 m/min. |

Tel. +39 0583 299023 Fax +39 0583 29173

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|--|
| RUSSIA | Study, design, construction and installation of one shaft less slitter rewinder, offset paper, writing and printing paper, variable width 360-3200 mm, speed 1800 m/min |
| BANGLADESH | Up-grade and Reconstruction of Beloit slitter rewinder, coated paper, writing and printing, width 4400 mm, with new drive and DCS control system, drive speed 2000 m/min |
| GREECE | Up-grade and Reconstruction of Jagenberg Varidur slitter rewinder, kraft papers, width 3600 mm, with new drive, speed 1500 m/min. |
| INDIA | Study, design, construction and installation of one Tissue slitter rewinder, 3 plies combining tissue winder, speed 1600 m/min |
| ITALY | Board slitter rewinder for strips, no.57 knife automatic positioning system, gluing system with automatic positioning system, automatic core loader with positioning system, 200-800 gsm, width 3.400 mm, speed 2.200 m/min. |
| SPAIN | Kraft slitter rewinder, no.15 knife automatic positioning system, gluing system, shuttle for mother reels and finish reels, system 90-200 gsm, width 2.900 mm, speed 2.200 m/min. |
| USA | Study, design, construction and installation of one Tissue slitter rewinder, with printing unit and unwinder unit, speed 1200 m/min. |

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|---|
| ITALY | Up-grade and Reconstruction of Jagemberg Varidur slitter rewinder, kraft papers, with new hydraulic NIP control system and DCS Scalink control system, speed 2000 m/min. |
| SPAIN | Up-grade and Reconstruction of Jagenberg Vari- Step slitter rewinder, kraft papers, width 3400 mm, with new drive, new cutting unit with automatic positioning system, speed 2200 m/min. |
| ITALY | Up-grade and Reconstruction of Bruderaus slitter rewinder, kraft & MG papers, width 5.400 mm, speed 1.800 m/min. |
| ITALY | Up-grade and Reconstruction of Jagemberg Vari- Flex slitter rewinder, kraft papers, width 3900 mm, with new drive, new cutting unit with automatic positioning system, speed 2000 m/min. |
| ITALY | Up-grade and Reconstruction of Jagemberg Vari- Dur slitter rewinder, kraft papers, width 3600 mm, with new drive, new cutting unit with automatic positioning system, speed 1800 m/min. |
| BANGLADESH | Study, design, construction and installation of Two Tissue slitter winders, 2 ply, speed 1500 m/min, no. 2 Calender units with GAP control system, no.2 wrapping unit. |
| ARGENTINA | MULTIFUNCIONAL REWINDERS: Study, design, construction and installation of 2 plies combining Tissue slitter rewinder, and MG Paper and light Kraft rewinder, speed 1600 m/min, width 3750 mm. |
| ITALY | Modification of two slitter rewinders for special paper, with dedicated paper passage. |

Tel. +39 0583 299023 Fax +39 0583 29173

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|--|
| ITALY | Rebuild the pope reel, with new component, arms movement with pneumatic and hydraulic control system. |
| POLAND | Study, design, construction and installation of one Tissue slitter winder, 3 ply, speed 1600 m/min, |
| ITALY | Winder for semi-extensible paper. Study and engineering for web tension control, new drive system, new slitting system, paper path. |
| SOUTH AFRICA | Study, design, construction and installation of 3 plies combining rewinder for tissue paper, speed. 1000 m/min. , trim width 2700 mm |
| ITALY | Reconstruction one Beloit Tissue Slitter winder, with a new Dienes cutting unit, tangential type, Simu-Flesh model, automatic positioning system, dedicated paper passage and control system, safety device modernization. |
| ITALY | Reconstruction one Jagenberg Tissue Slitter winder, with a new hydraulic control system for rider roll and core chucks and safety device modernization. |
| ITALY | Reconstruction one board slitter winder, with new cutting unit, min. cut width 60 mm, new paper passage and component, with control system, new safety devices and control. Drive control system and electrification. |

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|--|
| ITALY | Reconstruction one Recard Tissue Slitter winder, new cutting unit with tangential system, new paper passage, new automation and control system, safety devices. New control system for rider roll and core chucks from pneumatic to hydraulic. |
| PAKISTAN | Test Liner slitter and bag paper rewinder, no.10 knives with position visualization system, predisposition for gluing system for core, automatic core loader with automatic positioning system, 60-180 gsm, width 5.000 mm, working speed 2.500 m/min., design speed 2.800 m/min. |
| ITALY | Reconstruction one VAS kraft/Test Liner Slitter winder width 3 meters, with new drive and control system, working speed 2.000 m/min., electrification, hydraulic and pneumatic system, new Dienes cutting unit with automatic positioning system, new core chucks with automatic positioning system. CE documentation and re-Certification. |
| ITALY | Reconstruction one Jagenberg Slitter winder width 5,5 meters, with new motors, drive and control system, working speed 1.800 m/min., electrification, core chucks with automatic positioning system, core storage for core dia. 320/250/150 mm wit loader and introducer and a dedicated automatic gluing system; dedicated cross cutting system device directly on the core on drum rolls. CE documentation and re-Certification. |
| POLAND | Study, design, construction and installation of one Tissue slitter winder, 3 ply, speed 1600 m/min, 2850 mm trim width, complete with roll handling and wrapping line for rolls out of winder and out of tissue machine. |

Tel. +39 0583 299023 Fax +39 0583 29173

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|---|
| ITALY | Test Liner, Medium and Kraft slitter rewinder, no.10 knives with automatic positioning system, 50-170 gsm, width 2.600 mm, working speed 2.000 m/min., design speed 2.200 m/min. |
| ITALY | Board slitter rewinder for strips, no. 52 knives automatic positioning system "web-in", automatic core loader, 140-600 gsm, width 2.700 mm, working speed 2.000 m/min., design speed 2.200 m/min. |
| TURKEY | Board slitter rewinder for strips, no. 42 knives automatic positioning system "web-in", automatic core loader, 180-620 gsm, width 2.600 mm, working speed 2.000 m/min., design speed 2.200 m/min. |
| RUSSIA | Tissue slitter rewinder, three plies, width 2.800 mm, speed 1.500 m/min. |
| ITALY | Board slitter rewinder for strips, no. 40 knives automatic positioning system "web-in", automatic core loader, 180-700 gsm, width 2.600 mm, working speed 1.800 m/min., design speed 2.000 m/min. |
| GREECE | Unwinder for Sheeter, width 3.400 mm for Coated board 200-600 gsm |

| PAPER MILL LOCATION | PERFORMED WORKS |
|---------------------|--|
| GREECE | Rebuilding and Up-grade of Over Meccanica Tissue slitter rewinder, new relieving system by hydraulic unit for rider roll and core chuchs, new PLC and drive control system, width 2.800 mm, speed 1.400 m/min. |
| ITALY | Mother reel shuttle with automatic lift on pope reel and several parking positions, including unwinding station loading. |
| Others | Several assistance service for pope reels and slitter winders. Several General Service activities. |

TECNO PAPER SRL