THE EXCLUSIVE SIMA TECHNOLOGY APPLIED TO THE SYSTEM FOR THE PRODUCTION OF HEAVY DUTY TAPE FOR ROPES, TWINES, CABLE FILLER AND OTHER INDUSTRIAL APPLICATIONS

SIMA extrusion line Techno Tape-Rope is the most advanced technological solution in the field of fibrillated and not fibrillated PP and HDPE tapes production, designed for the fabrication of twisted rope, braided rope, fishing nets, bale twine, cable filler and other industrial applications. SIMA extrusion lines respect SIMA policy which is environment-friendly, i.e. oriented towards energy-saving in terms of design and new solutions, thus not affecting the performances of the equipment.

The line is conceived to offer the customers the optimum combination of quality and flexibility. This process, starting from the raw material to the packed and palletized finished spool, can reach a linear production speed beyond 300 m/l. The extrusion line Technorope ensures with the smallest investment compared with its high productivity, to cover the requirements of many market sectors, maintaining at the same time a high level of reliability and efficiency, not to mention the top quality of the finished product. The SIMA Technorope extrusion line is the most flexible rope-making line, at the forefront of the world market, and no doubt meeting the most sophisticated requirements of all customers.

HOPPER FEEDING – EXTRUSION – METERING: THE BIRTH OF THE PRODUCT

- Absolute precision in dosing and mixing of the raw materials and additives during the feeding process
- Homogeneity and plastification optimized without over heating during the extrusion process, thanks to the use of specifically studied extrusion screws
- Uniformity of thickness throughout the overall film width
- According to the application, possibility of installing large capacity stainless steel quenching tanks, single chill-roll or double chill-roll
- Absolute uniformity of temperature of the surface of chill-roll and automatic control of the water in the quench tank
- Adjustable air knife in conformity with the process requirements with air flow adjustable through A.C. motor controlled by inverters
- Double cutting unit, motorized and adjustable for all the cutting widths

MOLECULAR ORIENTATION OF THE PRODUCT

- The godets are capable of supporting up to 5,500 kilograms draw power
- Roll diameters of 320 mm engineered from specific materials to minimize slippage
- Increased surface thermal exchange, easy threading of the line, high production speed at low roll RPM
- Completely insulated ovens with direct air passage
- Automatic temperature control up to 250°C (tolerance +01°C) and air flow up to 32 meters per second controlled through inverters
- Air dispersion on the outside reduced to a minimum thanks to the aerodynamic study of the air flow

STABILIZATION PROCESS OF THE PRODUCT

Thanks to performing annealing process, elimination of internal tension are granted, which helps to obtain a uniformly oriented product free of localized memories, controlled elongation and stability of the product. All this allows to work in line with downstream equipment without shrinkage problems of the final product.

THE FIBRILLATION PROCESS

- The fibrillator unit applies to the tapes a desired degree of softness and pliability
- The whole device can be easily inspected to simplify the threading, cleaning and maintenance of the machine
- The fibrillator is equipped with its own A.C. motor, synchronized in line
- Fibrillator sectors are quickly replaceable, with needle densities of 6 – 8 – 10 – 12 – 14 needles/cm

The extrusion line Techno Tape-Rope is totally computer controlled, thus guaranteeing:
- Maximum reliability
- Minimum labor employment
- Easy handling
- Absolute versatility and reduction of starting times

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<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>PP (*)</th>
<th>Ø SCREW</th>
<th>LINE SPEED</th>
<th>LINE WIDTH</th>
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<tbody>
<tr>
<td>TECHNO TAPE-ROPE 75</td>
<td>140</td>
<td>75</td>
<td>180/250</td>
<td>600</td>
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<td>TECHNO TAPE-ROPE 160</td>
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<td>160</td>
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(*) Suggested PP with MFI 1,8 ÷ 3