

PRESS RELEASE

4-METER HDPE DIMPLED SHEET EXTRUSION LINE BRANDED AMUT GROUP

AMUT GROUP has recently manufactured and tested a plant for the production of HDPE dimpled sheet, with a net width of 4 meters, for a **Russian customer, being one of the biggest producers of materials for the building sector**. An important technological goal, proof of the Group's **continuous investments in R&D towards ambitious projects assuring high performances**.

The HDPE dimpled sheet is largely used to protect and provide drainage for the underground walls and it is **the latest solution for the proper protection and ventilation of the waterproofing mantle between cement foundations and ground**. Furthermore, its versatility makes it essential for the realization of buildings in zones where water presence is particularly high.

The line has a capacity higher than 1700 Kg/h and it offers the possibility to produce articles using all 4000 mm or, by applying a central cutting, to obtain 2 coils of 2000 mm each or even 4 coils of 1000 mm each (coils maximum diameter is 490 mm). The linear kinematic speed is equal to 12,5 m/min and the thickness range varies from 350 to 1000 g/sm.

The line, based on a EA 180 single screw extruder with L/D 45, is able to process material in granules as well as trims/flakes or post consume HDPE bottles, always assuring a uniform feeding, even when processing raw materials having different granulometry.

The line is composed of the following sections:

- loading system;
- raw materials dosing unit;
- single screw extruder with a plasticization capacity of more than 1800 Kg/h and equipped with a vacuum vent system with closed loop circuit for water, used in case of material coming from post consume bottles at the extraction of volatile components;
- continuous screen changer with increased screening;
- gear pump with high pressure, capable to process also potential types of polymers with a high molecular weight;
- flat die with melt exit width higher than 4.300 mm, so perfect to produce the maximum width even on low potential thicknesses of the finished product (< 300 g/sm).

It is also included a **special calendering/forming group** with particular solutions, realized thanks to AMUT wide experience in the thermoforming field. Such a width, combined with the linear speed demanded by the contract production guarantees (10 m/min of finished product), requested an accurate study of the two main forming rolls cooling flows made by means of recirculation/thermoregulation pumps; as well as a system for forming vacuum distribution capable to satisfy the different needs connected with the requested types of finished product.

Since **the line can process 100% of post consume material**, even the vacuum group had to be designed with condensation/reduction systems for the extrusion fumes which are potentially present as a pollutant in the melt and certainly problematic in the vacuum circuit.

Downstream the calendering/forming unit, an unwinding/lamination station has been installed to allow the introduction of 4-m wide geotextile materials. This station is complete with a distribution system of the hot melt glues used for different support/reinforce materials adhesion.

The end-line is composed of an automatic winder complete with a bench for the finished coils unloading/stacking.

The plant is also equipped by complementary and ancillary equipments such as:

- a group for the bilateral unwinding of the advertising/signaling strap directly applied during the forming phase;
- a grinding group for trims complete with a transport system to convey the ground material directly in the raw material loading/mixing zone.

A proprietary Software, developed and tuned specifically for this line particular exigencies, controls and checks all activities and parameters, by storing and monitoring the whole production process.