



EXTRUSION

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Key Topic:
Pipe and Profile Extrusion

Sales in Sub-Saharan African Markets boosted

Tecnomatic increases its presence in the Sub-Saharan African market by the delivery, to an important group of Mauritania, of four extrusion lines for polyethylene pipes. This new project, follows and confirms the good work performed by the company in the area, with important supplies in Tanzania, Ghana, Nigeria, Ivory Coast, South Africa, Ethiopia. To establish a constant and professional relationship in these markets, a strong focus has been placed in developing technical solutions able to increase reliability and



Water pipe installation and welding

to grant excellent performance and quality production even in harsh condition.

The project is expected to have considerable environmental and social impacts. The climatic context (drought and desertification), the degradation of natural resources as well as poverty, particularly among the least privileged segments of the population, have increased the

pressure on and demand for water facilities and the need for integrated resource management planning to cope with climate change. The UN Development Programme (UNDP) estimates that total budgetary spending in the water and sanitation sectors in sub-Saharan Africa is

currently around \$800 mn a year. This amount could likely be increased to \$2.5 bn through "cost recovery".

The manufacturing of pipes will help to support the development and major infrastructure works under way in the country. The customer, representing an



VEGA extruder 75.37 with VENUS 400 and PAC air cooling system, for efficient pipe production

important group of companies in the construction and trading business, even if has started its pipe production recently, has rapidly gained reputation because of its choices quality oriented.

Technical details of the line

The lines, characterized by reliable technological solutions – such as the extruders Vega with L/D ratio of 37 and Venus heads with internal pipe cooling (PAC) – will produce HDPE pipes with diameters up to 400 mm.

The VEGA series are the result of years of experience manufacturing extruders and of a constant effort to develop each part of them. A constantly updated screw design, matched with the water cooled straight feed bush, ensure excellent production values with optimal plasticizing, even at high output rate. The specific output has been further increased and it maintains constant across the whole



A communal water tap in a remote village

screw speed range or even at high backpressures values.

The machines are equipped with synchronous AC motors specifically designed to be used in applications at high dynamic

performances with variable speeds. The selected motors are mechanical sturdy to withstand high overloads while a highly effective insulation avoid a gradual deterioration caused by operation at high frequencies. Italian gearboxes characterised by single block cast iron frame, for large oil capacity cooled by an independent unit, and high performance bearing unit (up to 500 bars) fit out the transmission system of the VEGA series.

To process the high throughput with low backpressure and stress load to the ma-

terial VENUS die-heads are the proper tools. Based on a spiral distributor concept with a compact design thanks to their innovative geometries and the internal air cooling (PAC system) ensure an optimal wall thickness distribution, ovality and low sagging.

The lines are synchronized using gravimetrics on each extruder, to guarantee a continuous raw material feed and to record variations in mass throughput, thereby ensuring a perfect control of the weight per meter and wall thickness distribution. The downstream equipment includes Tecnomatic vacuum & cooling tanks, haul-offs with caterpillar tracks controlled by an independent vector AC motor and planetary saws with knife cutting and universal clamping device, for a very accurate swarf-less pipe delivery.

Tecnomatic S.r.l.

Via Emilia, 4, 24052 Azzano S. Paolo,
(Bergamo) Italy
www.tecnomaticsrl.net