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Pipe Extrusion: Sales in Sub-Saharan African Markets boosted

通过向毛里塔尼亚一家重要的集团交付四条聚乙烯管材挤出生产线，Tecnomatic公司在撒哈拉以南非洲的市场地位得到了提升。这一新项目通过这一地区的公司与在坦桑尼亚、加纳、尼日利亚、象牙海岸、南非、埃塞俄比亚等国家重要的供应商实施，已经证实了生产线具有良好的工作性能。为了在这一市场建立长期和专业的关系，Tecnomatic在开发技术解决方案以增加可靠性方面给予了极大的重视，生产线能够在严酷的条件下生产，并有着卓越的性能和出色的产品质量。

水管的安装和焊接
Water pipe installation and welding

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

VEGA挤出机75.37，配备VENUS 400 和 PAC 空气冷却系统，用于高效率生产管材
VEGA extruder 75.37 with VENUS 400 and PAC air cooling system, for efficient pipe production

预计管材挤出生产线这一项目有着相当大的环境和社会影响。气候环境（干旱和沙漠化），自然资源的退化以及贫困，特别是在最不享有特权阶层的人口中，需要水的设施和需要整合资源管理计划以应对气候的变化，这方面的压力增加了。联合国开发计划署（UNDP）估计：在撒哈拉沙漠以南非洲，当前花费在水和环境卫生部门的总预算是大约一年8亿美元。通过“成本回收”，这一数额可能会增加到25亿美元。

管材制造业将有利于支持发展这个国家主要的基础设施工作。这家客户代表了建筑和贸易业务公司重要的集团，即使最近才开始其管材生产，但声誉有着快速的增长，这是因为公司选择了以质量为导向的方针。

生产线的技术细节：

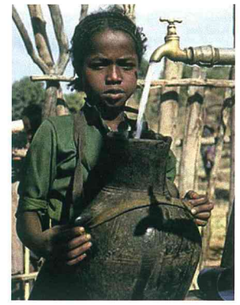
采用可靠的技术解决方案是生产线的特色：例如Vega挤出机，长径比37，带管材内冷（PAC）的支架式模头，可生产直径达400mm的HDPE管材。

Vega系列挤出机是凝聚了多年的制造经验并不断努力研发每一个挤出机零件的成果。螺杆的设计不断改进，与水冷直接进料衬套相匹配，即使在在高产量生产时也有最佳塑化效果，能够保证出色的产品价值。特性输出产量已经有进一步提高，并在整个螺杆转速范围内或甚至高背压值下保持了恒定。设备配置了同步交流电机，速度可变，特别适合于高动态特性的应用场合。精心挑选的电机，机械结构坚固，能承受高过载，同时高效的绝缘层防止了在高频率运转下绝缘的逐渐恶化。Vega系列挤出机采用意大利的齿轮箱，其优点在于整体式铸铁框架，独立的冷却单元具备强大的油冷却能力，VEGA系列挤出机的传动系统采用高性能轴承单元（耐压高达500bar）。

为了实现高产量和低背压生产，并将压力负荷施加于原料，VENUS模头是适合的成型模具。基于螺旋分配器理念及采用紧凑设计，得益于创新的几何形状和内部空气冷却（PAC系统），最佳的壁厚分布、不圆度和低下垂都有了保证。

生产线的每台挤出机都采用同步称重计量，这样就能保证连续的物料喂料和记录整个产量的变化，从而实现了对每米重量和壁厚分布完美的控制。下游设备包括Tecnomatic真空和冷却罐，由独立的矢量交流电机控制的履带轨道式牵引机以及带切刀和通用夹持装置的行星式切割锯，可生产出精确的无屑管材成品。

遥远村庄的公共水龙头
A communal water tap in a remote village



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 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 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 material 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 swarfless pipe delivery.

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