



DANOBAT

TUBOS REUNIDOS

SUCCESS STORIES

**FULLY
ROBOTISED
LINE**

**REDUCES
CUTTING TIME
BY AS MUCH
AS 50%**



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High-technology pipes for use in oil drilling facilities at depths of 4000-5000 m

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THE CHALLENGE

Tubos Reunidos has opened Spain's first high-performance OCTG threading plant. A joint venture with the giant Japanese steel distributor Marubeni-Itochu (MISI) has resulted in the setting up of Tubos Reunidos Premium Threading (TRPT) to make high-technology pipes for use in oil drilling facilities at depths of 4000-5000 m.

These extreme working conditions call for patented PREMIUM connections that offer above-standard performance, for which Tubos Reunidos has obtained a licence from leading Japanese threading firm JFE.

THE SOLUTION

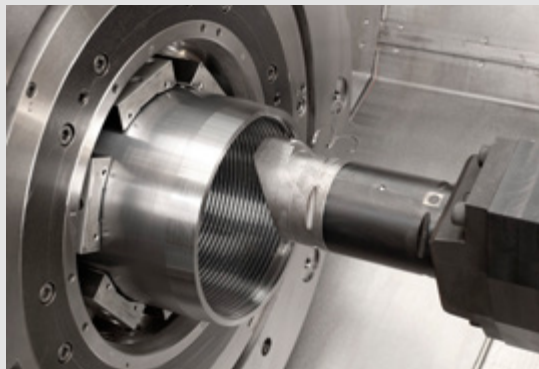


To cover these needs TRPT brought this challenge to DANOBAT and together they have developed and installed the latest generation of DANOBAT machines at their plant, which measures more than 30,000 m², setting up a high-technology production line.



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This is the world's first operational line to
integrate all machining and tool change
operations
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THE EQUIPMENT



Specifically, for pipe threading the line is equipped with 2 sophisticated DANOBAT TTB lathes, the stand-out feature of which is their high machine stiffness. This enables them to work with 2 tools simultaneously, machining on 4 axes. Pipe stopping and centring are also integrated into the automatic cycle thanks to special chucks designed specifically for this critical operation. The lathe also automatically deposits the chatter killer, the latest technological innovation developed by DANOBAT, inside the pipes to eliminate any chatter that may occur during threading. The equipment is completed by feeder tables, also featuring DANOBAT engineering, which integrate pipe loading & unloading automatically, thus optimising productivity. TRPT thus has a state-of-the-art pipe threading line that enables it to cut lead times and assure optimum quality.

The new Tubos Reunidos plant is also intended to manufacture these bushings. Starting from a thicker pipe, they are cut to length as necessary then threaded at both ends for use in joining two pipes together. This is done on a fully robotised line supplied on a turnkey basis by DANOBAT.

The line features a high-production saw that automatically adjusts the cutting length depending on the product to be made. This saw is controlled via iCS Intelligent Cutting System software capable

of adapting conditions to the actual cut cross-section, controlling tool deflection. This optimises quality and reduces cutting time by as much as 50%. The cut workpiece is fed by 2 robots into the three lathes used to fully turn and thread the bushing. These are CL series lathes designed specifically for this task, with thermo-symmetric heads that minimise heat dilation and assure an extraordinary standard of dimensional accuracy. Tools are changed automatically by the robots as they load the bushing.

This is the world's first operational line to integrate all machining and tool change operations, and it thus provides Tubos Reunidos with a complete, high value-added solution.