

Application Highlight:

Automotive Exhaust Components Manufacturer Upgrades Laser Cutting Process to 2500 Series™



In Ningbo, China, Tajco Group (Grinsted, Denmark) produces exhaust extensions for the global automotive industry. In 2007 Tajco switched from Siemens® S7-300 to CTI 2500-C400 controllers in their plating operations. The latest upgrade to CTI processors is in the laser cutting and welding operations using a Trumpf laser.

Three laser systems are installed, one for 2-D cutting, one for welding and one for 3-D cutting, but only one can be active at a time.

The cutting and welding operations are performed through coordination of XY positioning equipment, robots, and the laser.

CTI System Integrator Manor Group Automation ApS installed a CTI 2500-C200 and a small UniOP panel to provide this overall coordination of the process, using a combination of standard I/O and Profibus. The control program was implemented in APT®, because the modular program nature of APT® made it possible to very easily extend the program to operate other robots.



PROGRAM CONTENT	

COMPILE	
CONTROL	[] Configuration for compile
OBJECT	[] Successfully compiled program
TABLES	
IO	[] Symbolske name for I/O
MODULE	[] Module definition table
DEVICE	[] APT devices bruges ikke ???
DECLARE	[] Symbolske name for variable
RECIPE	[] APT Recepter bruges ikke ???
SUBROUTINE	[] Subroutine table

TIMES	
SELECTOR	[] JOB SELECTER F. LASER PRIORITY
LASER	[] LASER
XY_TABLE	[] XY_TABLE
ROBOT_02	[] ROBOT_02
ROBOT_01	[] ROBOT_01

RECIPE TEMPLATES	
	-SFC'S-
	-CFC'S-

Communication with the XY positioner is accomplished using 64 digital I/O's, and the Laser & Robots are controlled from Profibus. The extremely fast scan time of the C200 PLC (2-7ms) made possible the use of handshake telegrams to keep synchronization between the PLC and Laser.

Overall benefit to the customer from the project was an increase in throughput made possible because of the high performance of the CTI 2500 Series™ Processor.

Future projects at this plant will include installation of a 2500-C400 for operating the new flash chrome line. On completion of that project, CTI PLCs will be running the Degreaser, the Bright Chrome Line, the Waste Water Line, the Trumpf Laser Robots line, and the new Flash Chrome Line.



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