

INDUSTRIAL MACHINERY OR EQUIPMENT



FLUE-GAS DESULFURISATION UNITS

Flue-gas desulfurisation devices are attached to thermal-powered generating stations to prevent atmospheric pollution. The inside of these scrubbers, at a coal-fired power plant, is a highly corrosive environment, due to the high concentrations of chlorides from the concentrations of chlorine in the fuel. Duplex stainless steels are able to deliver long, inexpensive service lives. Besides, duplex stainless steel is a cheaper solution than coated carbon steel and high-nickel alloy.

LOCATION/ENVIRONMENT	Industrial
PRODUCT	Plate
FABRICATION PROCESS	Cold forming , welding
GRADE	UNS32205 (22Cr-5Ni-3Mo-N-Low C)
SURFACE	HRAP (Hot rolled, annealed and pickled - No.1)
COMPETING MATERIAL	Coated carbon steels, high nickel alloys
DATE OF COMPLETION	First use of duplex in FGD was Tennessee Valley Authority, Paradise Power Station
MANUFACTURING COMPANY	PSP USA
MATERIAL SUPPLIER	Industeel
SOURCE OF INFORMATION	Industeel
REMARKS	Photo shows a typical flue-gas desulfurisation unit (not at TVA Paradise Power Station).

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MONOPHASE STEP VOLTAGE REGULATOR

Unstable power supply (voltage and load) is a problem for industrial plant, affecting stability of operations and energy consumption. A new monophase step voltage regulator, useable in many different environments, has been developed to stabilize incoming power supply. The corrosion of carbon steel reduces the durability of the equipment and increases maintenance costs. Stainless steel's mechanical strength and corrosion resistance improve length of life and profitability.

LOCATION/ENVIRONMENT	Various environments (coastal, rural, urban, industrial), always installed outdoor
PRODUCT	Sheet
FABRICATION PROCESS	
GRADE	Type 316L (17Cr-12Ni-2Mo-Low C)
SURFACE	2B
COMPETING MATERIAL	Carbon steel
DATE OF COMPLETION	2005
MANUFACTURING COMPANY	Toshiba Corporation
MATERIAL SUPPLIER	Acesita – service centres
SOURCE OF INFORMATION	Nucleo Inox
REMARKS	