

**NORAM**  
**SULFURIC ACID**  
Products and Services

# NORAM SX™ PIPING





Sulfuric acid piping is a crucial component of any acid plant. **NORAM SX™ sulfuric acid piping** offers significant advantages over conventional piping systems in terms of reliability, safety and maintenance, resulting in overall cost benefits to the acid plant.

Corrosion rates of NORAM SX™ is practically zero in the typical operating range of the drying and absorption circuits, even at high acid velocities. The resistance against occasional process excursions and upset conditions is also exceptional.

The excellent corrosion properties allows for reduced pipe diameters, since higher acid velocities can be utilized. Wall thickness of the piping systems can be reduced, leading to a lighter weight and easier handling. The life expectancy of the piping system equals the service life of the acid plant itself. Also, the plant performance is improved due to cleaner acid with considerably lower corrosion products and sulfate build-up.

NORAM SX™ is easy to weld, work and handle. Flange connections are replaced by welded joints and the piping system can be prefabricated and easily field erected or modified. Spare inventory can be dramatically reduced since pipe spool spares are not required.

The features of NORAM SX™ piping offer long reliable service life, high safety, and low maintenance results in high plant availability at minimum life cycle cost.

The NORAM SX™ piping has been developed to meet all the specific requirements of a sulfuric acid plant. The components are rated in accordance with ASME as well as EN codes and fabricated with strict quality assurance and extensive testing.

NORAM SX™ standard pipes and fittings are available from stock or are custom made. The standard range of pipe and fittings cover sizes from 1" (DN25) to 24" (DN600), with larger sizes available on request.

Special parts such as Strainers, Vortex breakers, Thimbles, Thermo-wells and Dip Pipes are also available.



## NORAM ENGINEERING AND CONSTRUCTORS LTD.

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**Ask about the products and services  
NORAM supplies to the sulfuric acid industry:**

**NORAM PLANTS, PROCESSES, SYSTEMS, AND PROCESS EQUIPMENT**

NORAM PLANT UPGRADE AND DEBOTTLENECKING ENGINEERING STUDIES  
NORAM/CPPE HYBRID SULFURIC ACID PROCESS (HSAP)  
NORAM CLEAN START™ PROCESS  
NORAM PLANT PREHEATING SYSTEMS  
NORAM'S TURBOSCRUBBER FOR GAS SCRUBBING  
NORAM STAINLESS STEEL CATALYTIC CONVERTERS  
NORAM RF™ RADIAL FLOW GAS-TO-GAS HEAT EXCHANGERS  
NORAM SF™ SPLIT FLOW GAS-TO-GAS HEAT EXCHANGERS  
NORAM BRICK-LINED ACID TOWERS  
NORAM SULFUR & SPENT ACID BURNERS  
NORAM CELLCHEM SULFUR BURNERS  
NORAM ANODICALLY PROTECTED ACID COOLERS  
NORAM SX™ ACID COOLERS  
NORAM SX™ TOWERS AND NORAM SX™ PUMP TANKS

**NORAM EQUIPMENT INTERNALS, PERIPHERALS AND ANCILLARY EQUIPMENT**

NORAM HP™ SADDLE PACKING FOR ACID TOWERS  
NORAM SMART™ ACID DISTRIBUTORS FOR ACID TOWERS  
NORAM TROUGH ACID DISTRIBUTORS FOR ACID TOWERS  
NORAM SX™ CHIPGUARD CG™ ACID STRAINER  
NORAM ENTRAINMENT MITIGATION DEVICE (EMD)  
NORAM ACID DILUTION SYSTEMS  
NORAM SX™ MATERIAL  
NORAM SX™ ACID DISTRIBUTORS  
NORAM SX™ PIPING  
NORAM SX™ VALVES  
NORAM GAS DUCTING  
NORAM DAMPER  
NORAM SULFUR GUNS

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