

# MECS® STEAMAX HRS™ SYSTEM

## GREEN TECHNOLOGY THAT PRODUCES UP TO 30% MORE STEAM AND MORE ENERGY



### SULFURIC ACID PLANT ENGINEERS HAVE REDOUBLED THEIR EFFORTS TO REDUCE PLANT ENERGY AND OPERATING COSTS USING ADVANCED HEAT RECOVERY METHODS.

MECS® pioneered heat recovery systems in sulfuric acid plants and has accumulated over 25 years experience with their proprietary HRS™ technology. The newest breakthrough is the SteaMax HRS™ System. It provides for a significant increase in medium pressure steam, adding to the flexibility of the steam's use and customization for site specific energy requirements and other local conditions. When the unit cost for energy is high, and if the local requirements for steam are met, commercial opportunities for production of electricity can provide electrical grid offsets or a revenue stream from the sale of the electrical energy. Sulfuric acid plants throughout the world can utilize and profit from the recovered heat and enhanced steam generation provided by the MECS® SteaMax HRS™ System.

### FEATURES AND BENEFITS:

- Recover more heat, resulting in up to 30% more steam
- Green technology – when HRS™ steam is converted to electricity, it's "CO<sub>2</sub> free" power
- Upgrading low pressure steam to medium pressure steam provides more utility and flexibility
- Maintains the same high reliability that is associated with MECS HRS™
- Easier to control the SteaMax HRS™ System within optimum operating parameters
- Less water usage for lower plant operating costs



**MECS®**

**SULFURIC  
PROCESS TECHNOLOGIES**

Learn more at [www.mecsglobal.com](http://www.mecsglobal.com)

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## ECONOMIC ANALYSIS

THE STEAMAX HRS™ SYSTEM VS. THE STANDARD MECS® HRS™ SYSTEMS



	DESIGN EXPORT STEAM kg/hr	DESIGN EXPORT STEAM t/t	NET PRESENT VALUE US \$
No steam injection	47,000	0.47	\$11M
Conventional steam injection	52,800	0.53	\$14M
SteaMax HRS™ System	63,800	0.64	\$18M

The values in the table above assume a 2400 MTPD sulfur burning plant with a 12% cost of capital and a steam value of \$15/t. These values also assume that the HRS steam is used as process heat.

## 22ND CENTURY ENERGY TECHNOLOGY, AVAILABLE TODAY

MECS® is the global leader in the design of sulfuric acid plants and related high performance products, such as the SteaMax HRS™ System for the phosphate fertilizer, oil refining and metal smelting industries. Together, with process technology and engineering expertise, MECS® teams with a worldwide network of joint ventures, licensees, relationships with engineering procurement & construction companies and suppliers to bring you unsurpassed sulfuric acid technology and operating reliability. MECS' worldwide organization consists of personnel in project and product management, process and design engineering, marketing and sales engineering. Using current state-of-the-art tools such as ASPEN, 3D CAD and CFD, MECS® can add even more value to plant and technology designs. A high percentage of the MECS® organization has previous sulfuric acid plant operating, maintenance, and/or start-up experience which helps to bring a practical approach to engineering evaluations, trouble-shooting and new technology solutions.



[www.mecsglobal.com](http://www.mecsglobal.com)

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