

GENERAL INFORMATION

Company name: _____ End user name: _____
 Address: _____ End user location: _____
 Contact name: _____ Plant number: _____
 Email address: _____ Date: _____
 Phone number: _____

Purpose of design: check all that apply _____

- Improve conversion
 Increase capacity
 Energy improvement
 Model plant data
 New plant
 Existing plant with new converter
 Existing plant with existing converter
 Recommend replacement catalyst

EXISTING PLANT DATA

Sulfur source:

- Sulfur burning
 Metallurgical
 Spent acid

Other: _____

Plant type:

- Single absorption
 Double absorption
 3x1
 3x2
 2x2
 Other: _____

Is there air dilution? Yes No

If yes, into which passes? _____

Dilution air temperature? _____ (°F °C)

Is there a scrubber downstream of the converter?

- Yes No

Is there a heat recovery system present? Yes No

Barometric pressure _____ atm mmHg
 Current/typical plant capacity _____ STPD MTPD

PLEASE NORMALIZE TO 100% H₂SO₄

Converter Inlet Gas Concentration %:

SO₂ % _____ O₂ % _____

SO₃ % _____ CO₂ % _____

Sulfur burner outlet temp? _____ (°F °C)

FOR SULFUR-BURNING PLANTS ONLY

Inlet air temp. to sulfur burner: _____ (°F °C)

FOR SULFUR-BURNING PLANTS ONLY

Measured SO₂ emissions: _____ (ppm lb/ton kg/MT)

Measured residual O₂: Yes No

Is there a common pumptank between the IPAT and FAT?

- Yes No

Is there a cross-flow stripping tower? Yes No

METALLURGICAL AND SPENT ACID PLANTS

EXISTING CONVERTER DATA

Capacity	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	_____
Volume (liters)						
Catalyst type						
Approximate age						
Approximate date of last screening						
Maximum volume (liters)						

Measured temperature at current/typical capacity	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	_____
Inlet temperature (<input type="checkbox"/> °C <input type="checkbox"/> °F)						
Outlet temperature (<input type="checkbox"/> °C <input type="checkbox"/> °F)						

Pressure drop across catalyst beds	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	_____
Pressure drop (<input type="checkbox"/> in H ₂ O <input type="checkbox"/> mm H ₂ O)						

Converter dimensions	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	_____
Inside diameter (<input type="checkbox"/> feet <input type="checkbox"/> meters)						
Outside diameter of internal heat exchanger (<input type="checkbox"/> feet <input type="checkbox"/> meters)						

What is the maximum allowable Pass 1 outlet temperature? _____ (°C °F)

Method of catalyst screening: (Manual Mechanical)

Frequency of catalyst screening in Pass 1: Every _____ years

KNOWN PROBLEMS

Boiler leaks: _____

Heat exchanger leaks or limitations: _____

Acid tower issues: _____

ADDITIONAL COMMENTS



PLANT DATA FOR NEW CATALYST DESIGN

For revamp studies, please complete the information below that is different than the existing plant.

Sulfur source:

- Sulfur burning
- Metallurgical
- Spent acid
- Other: _____

Plant type:

- Single absorption
- Double absorption 3x1 3x2 2x2
- Other: _____

Is there air dilution? Yes No

If yes, into which passes? _____

Dilution air temperature? _____ (°F °C)

Is there a scrubber downstream of the converter?

- Yes No

Is there a heat recovery system present? Yes No

Barometric pressure _____ atm mmHg

Desired plant capacity _____ STPD MTPD

PLEASE NORMALIZE TO 100% H₂SO₄

Converter Inlet Gas Concentration %:

SO₂ % _____ O₂ % _____

SO₃ % _____ CO₂ % _____

Desired SO₂ emissions: _____ (ppm lb/ton kg/MT)

OR desired conversion: _____ %

Request guarantee period: _____ years

Is there a common pumptank between the IPAT and FAT?

- Yes No

Is there a cross-flow stripping tower? Yes No

PLEASE NORMALIZE TO 100% H₂SO₄

OTHER GOALS FOR NEW CATALYST DESIGN



CONVERTER DATA FOR NEW CATALYST DESIGN

Capacity	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	_____
Catalyst type						
Maximum volume (liters)						
Bed temperature	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	_____
Inlet temperature (°C °F)						
Converter dimensions	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5	_____
Inside diameter (feet meters)						
Outside diameter of internal heat exchanger (feet meters)						

KNOWN LIMITATIONS

KNOWN PLANT UPGRADES OR CHANGES

ADDITIONAL COMMENTS

Please submit completed form to sulfuricacidcatalyst@mecsglobal.com or your local MECS® representative.

