

SULPHUR PROCESSING



ABOUT SULPHURNET

Sulphurnet has focussed its activities on the brighter production of sulphur processing in sulphuric acid plants and sulphur re-processing facilities. Sulphurnet understands the need of engineers, give technical support, trainings and supplies essential equipment and spare parts. In a process of mutual consultation we look at your main goals and objectives: "Need more production volume, improve sulphur quality or reduce maintenance cost". When you know your objectives we can work out the best solution in sulphur processing. We offer the following products and services:

- ◆ Plant Lay-Out & Operation Plant Audits
- ◆ Process Design and Basic Engineering
- ◆ Detailed Engineering
- ◆ Consulting & Economic Studies
- ◆ Liquid Sulphur Filters
- ◆ Liquid Sulphur Polishing Filters
- ◆ Sulphur Self Cleaning Strainers
- ◆ Filters for Sulphuric Acid
- ◆ Sulphur Melters
- ◆ Jacketed Plug & Ball valves

TROUBLE SHOOTING

Our strengths includes a small dedicated team focused on sulphur processing. A trouble shooting study undertaken by Sulphurnet starts with the review of existing plant, examination of the P&ID, following the operation procedures and hands-on operation practice is analyzed. We try to find the bottlenecks and offer proposals for improvement.

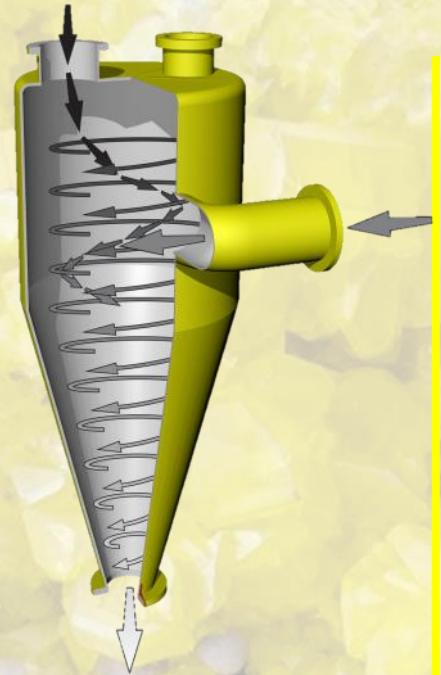


ENGINEERING SERVICES

Sulphurnet offers process engineering services for sulphur melting facilities. We are a service oriented firm and our vision is to "provide the best and safest sulphur melting and purification technology". Sulphurnet can provide Basic- as well as Detailed-Engineering and key-equipment for your plant. As supplier of sulphur processing equipment and prevailing process design Sulphurnet has a full understanding of all aspects of sulphur melting & purification and processing plants.

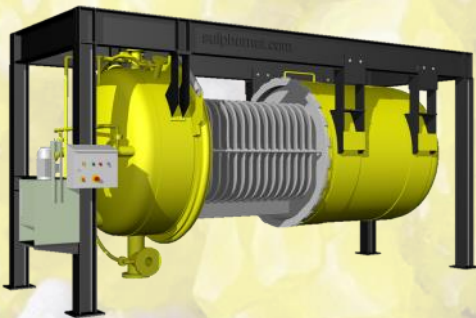
SULPHUR MELTING EQUIPMENT

Sulphurnet offer various design of melting equipment. We offer concrete melting pits, for in ground or above ground installation. We also offer above ground melters in carbon steel brick lined construction. Melters are with coils and impeller to intensify the melting process. Our latest development is a FLASH Melter which offers the advantages that it can handle sulphur with high moisture contents. The quick evaporation of moisture results in a free of moisture liquid sulphur, without foaming.



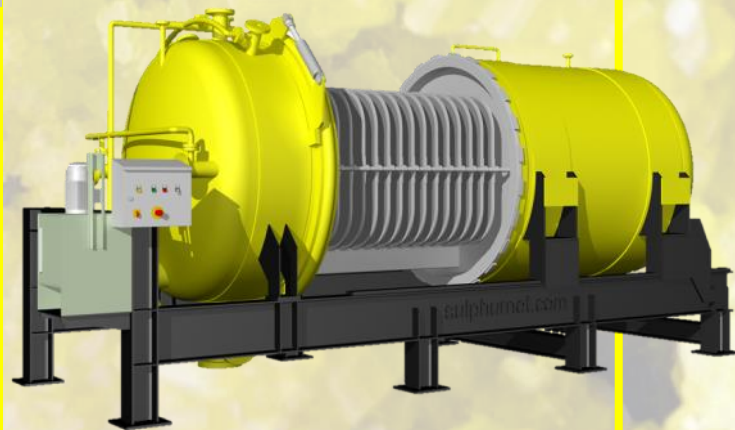
FILTRATION SOLUTIONS

With the choice of the Liquid Sulphur Filter system the sulphur quality is established. Straining is coarse filtration for the protection of the sulphur burners or the openings in sulphur forming equipment. Liquid Sulphur Pre-coat Filters and Polishing Filter are used for the protection of the catalyst bed in sulphuric acid production. Based on the requirements we size and produce Liquid Sulphur Filters.



LIQUID SULPHUR PRE-COAT FILTERS

The primary Purpose of the Sulphurnet Liquid Sulphur Filter (LSF) is to remove contaminants such as ash, lime, lime by-products and bitumen that might plug the catalyst bed in the converter of the down stream sulphuric acid plant. The removal of these solids also decrease maintenance cost and improves the operation of sulphur burners. The LFS filter produces a high filtrate clarity after the precoat run. The regeneration time between the filtration cycle is short.



SELF CLEANING STRAINER

Sulphurnet's Self Cleaning Strainer is designed for the inline removal of compact impurities in liquid sulphur. Its robust construction makes it suitable for industrial applications where reliability and continuous operation are essential. This strainer is a very effective system where the pre- or final filtration in the range of 30-1000 micron range is required. The filter consists of a jacketed vessel holding a wedge wire filter element. Sulphur is flowing from the inside to the outside of the filter element. The filtration principle is based on filter elements, with the dirt particles being retained on the inside surface of the filter element. Rotating scrapers ensure that the filter has a very high dirt removal capacity due to the frequent scraping of the surface. In the cleaning process a number of angled, positioned, rotating scrapers push the solid particles down into the sludge chamber where a concentrated slurry is formed. And discharged at appropriate intervals.



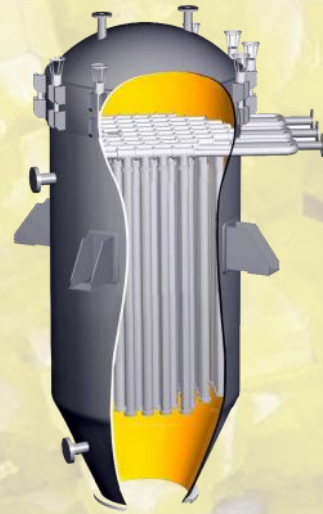
TURBIDITY ANALYZER

Sulphurnet offers an online turbidity measurement system designed to provide in-line real time control of the ash content in the sulphur filtrate line. The Sulphurnet Turbidity Analyser measures in the low ppm range. The system will be supplied with a jacketed measuring device. And includes a control box with outputs to the main computer system.



LIQUID SULPHUR POLISHING FILTER

The most optimal filtration results can be achieved by the implementation of Sulphurnet Liquid Sulphur Polishing Filter. This filtration characteristic is a depth filter system and will remove the last contaminants from the sulphur. Filtration efficiency as low as $5\ \mu$ can be achieved. The construction and operation of the filter is designed in such way that the cleaning step is efficient and thorough. The Sulphur Polishing Filter helps to reduce the pressure differential build up in the converter and reduce the maintenance cost and operation losses of the acid plant. The polishing filter can be installed in existing plants.



FILTER ELEMENTS POLISHING FILTER

The most common filter medium used in Sulphur Polishing Filters are Porous Ceramic Filter Tubes. Porous Ceramic cartridges are manufactured from aluminium oxide which exhibits a high chemical resistance and mechanical strength. The fine porous types with a smooth surface are particularly suitable for fine filtration utilizing back-wash.



FILTER LEAVES

Filter Leaves are the heart of the filter system and therefore the most critical part of the Liquid Sulphur Filter. Good filtration performance begins with quality filter leaves. Sulphurnet offers various designs of Filter Leaves for all brands of liquid filters. Standard Filter Leaves consist of several layers of mesh, the inner mesh coarser for a free flow of the filtrate and the support of the drainage and filter layer. We offer two types, 5 layer and 3 layer Filter Leaves for liquid sulphur filtration: We offer bolted construction so the Filter Leaves can be remeshed on-site. All filter leaves have a filtrate discharge outlet nozzle. This can be equipped with a single or dual "O"-ring construction for a leakage free sealing.



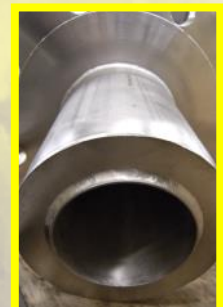


JACKETED VALVES

- ◆ No lubrication, Free of maintenance
- ◆ Teflon®-sleeve fully retained at top, bottom and around ports
- ◆ Minimized body cavities for residuals or contamination
- ◆ Heating from flange to flange, optional partially heated
- ◆ Long durability
- ◆ ANSI or EN Flanged connections

RADAR MEASUREMENT

- ◆ Maintenance-free level measurement; no condensation of sulphur
- ◆ For agitated melter/vessel as well as for storage tanks
- ◆ Reliable with an accuracy ± 3 mm from 1 to 10 m
- ◆ EX approval for hazardous area's
- ◆ Equipped with a 4-button touch screen display, easy-to-set up
- ◆ Outputs 4-20 mA, Hart
- ◆ 3" ANSI or 80 EN flanged connection



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