

# Liquid Sulphur **POLISHING FILTER**



## **High-Efficiency Filtration**

Fine filtration at the sub-micron level for acid plants/catalyst protection



At Sulphurnet, we focus on delivering **tailored solutions** for sulphur melting and purification plants. Our process engineering and filtration skills enable us to provide a comprehensive design package, all in one place. We manage **every phase of your project**, from Basic Process Design to complete production units, including after-sales support.

Our instruments are optimally designed specifically for sulphur applications, ensuring **maximum efficiency and safety**.

If you need innovative solutions, our team is dedicated to exploring new possibilities, designing **custom-made solutions**, and achieving effective results. We aim to turn your challenges into successes.

Choose Sulphurnet for **expertise** and customized solutions that enhance efficiency and performance in your chemical processes.

**Sulphurnet – Get it right the first time**

# Pure Sulphur, Seamless Operations

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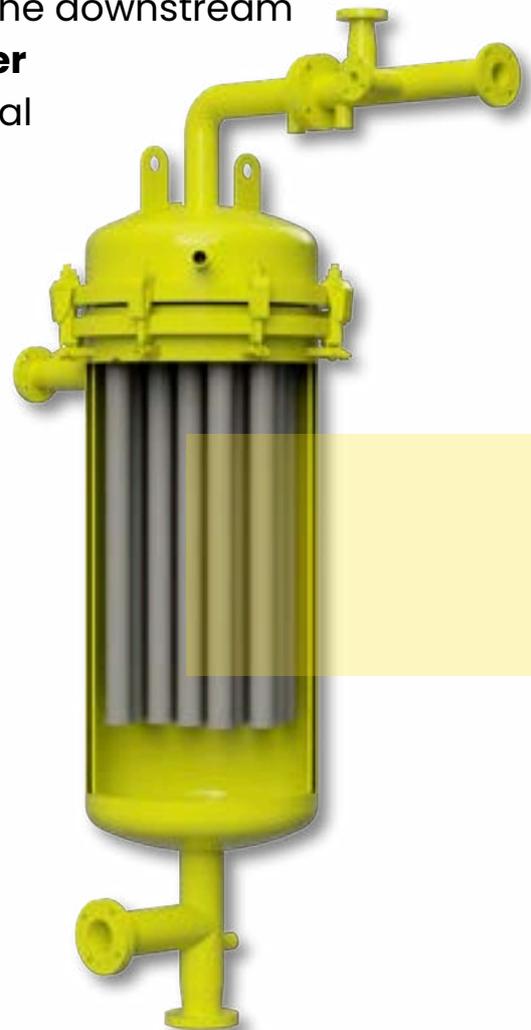
# Superior Filtration

Optimized for liquid sulphur processing, this polishing filter effectively **removes final contaminants** such as filter aids and ashes that can clog the catalyst bed.

By eliminating these solids, the filter reduces pollution in the waste heat boiler and prevents pressure buildup in the downstream converter of the acid plant. This results in **lower maintenance costs** and enhanced operational efficiency for your sulfuric acid plant.

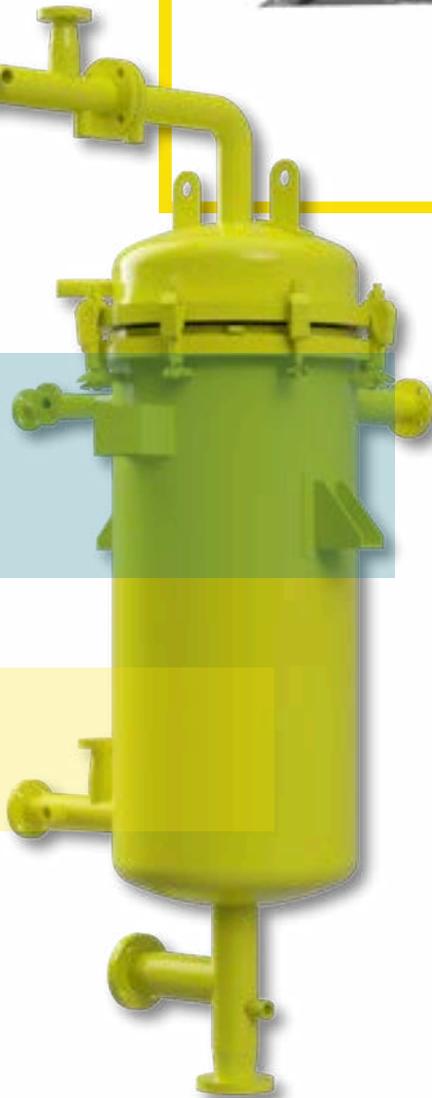
## Key Benefits

- **Effective Contaminant Removal:** Removes fine solids from liquid sulphur with high efficiency.
- **Automated Cleaning:** Features steam backflushing for automated and thorough cleaning.
- **Durable Filter Elements:** Long-lasting ceramic filter elements ensure robustness and reliability.
- **High Filtration Efficiency:** Achieves 99.9% efficiency with a 5-micron filtration rate.
- **Reduced Ash Content:** Lowers ash content to less than 8 ppm, enhancing system cleanliness.



# **A State-of-the-Art Solution for High- Quality Filtration**





## How It Works

Our Liquid Sulphur Polishing Filters utilize **ceramic filter tubes** made from aluminum oxide grains. These tubes offer high chemical resistance, which allows for the solids to be retained on the outside of the tubes.

**Closed Operation:** Reduces sulphur fume emissions, maintaining a clean sulphur area. ■

**Catalyst Protection:** Extends maintenance intervals, potentially reducing shutdowns from annually to every three years. ■

**Waste Reduction:** Minimizes waste materials and costs, with the potential for sulphur recovery. ■

# Ceramic Filter Tubes

Our Liquid Sulphur Polishing Filters primarily use **ceramic filter tubes** as the filtration medium. Crafted from aluminum oxide grains, these tubes are known for their exceptional chemical resistance and form a robust, uniform porous structure.

The fine porous varieties, with their smooth surfaces, are particularly well-suited for precise filtration, **utilizing backwash cleaning technology**. Solids are effectively retained on the exterior of the tubes, while the filter cake is efficiently removed by back blowing with steam.

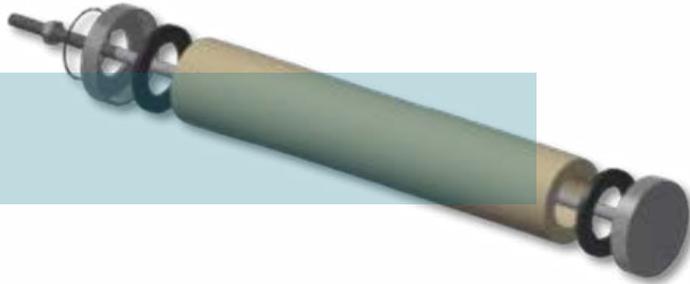


## Key Features

- High Temperature Resistance
- Excellent Corrosion Resistance
- Outstanding Mechanical Strength
- Precise Filtration Efficiency
- Smooth Surface for Easy Cleaning



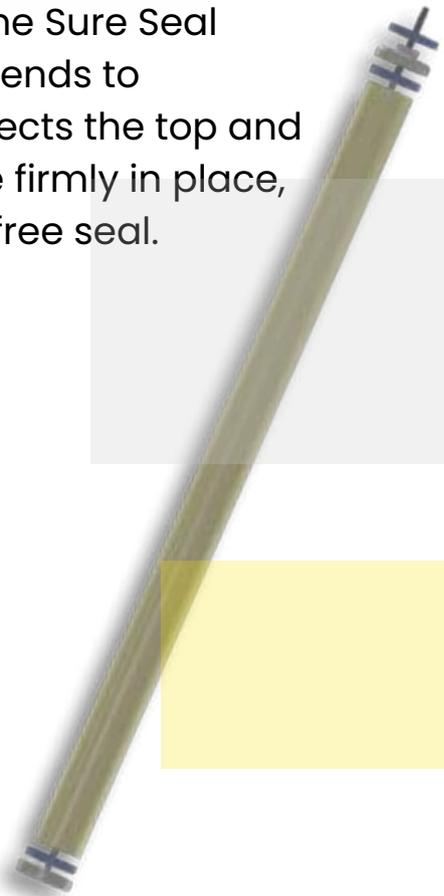
# Sure Seal Filter Tube Holder



To ensure optimal positioning and sealing, the Sure Seal Filter Tube Holder features end caps at both ends to **securely hold the gasket**. A center rod connects the top and bottom caps, keeping the ceramic filter tube firmly in place, preventing movement and ensuring a leak-free seal.

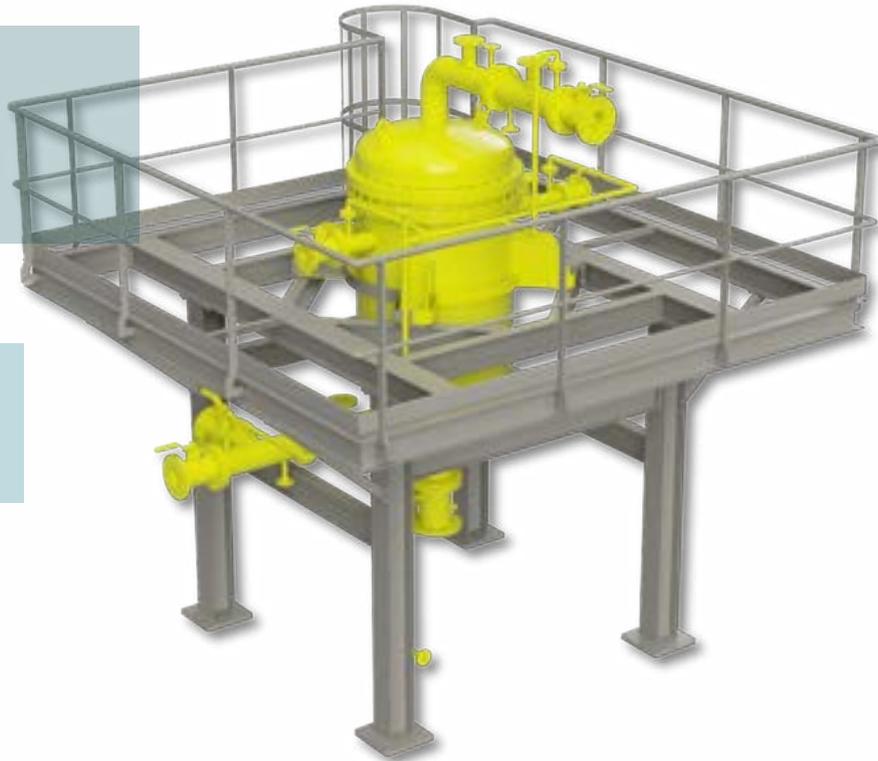
## Materials

- **Housing:** Tanks and all wettable parts are available in carbon steel.
- **Internals:** Ceramic filter candles with 316SS candle support.
- **Ceramic Filter Tubes:**
  - Manufactured from aluminum oxide grains (Type SCC-08).



# Cleaning Process

Cleaning is performed by **injecting high-pressure steam** in the reverse direction. Steam follows the path of least resistance, making clean tubes allow steam to pass through easily, while clogged tubes do not clean efficiently. Individual outlets are used to sequentially clean each register of filter tubes, resulting in more efficient cleaning and doubling the filter tubes' lifespan.

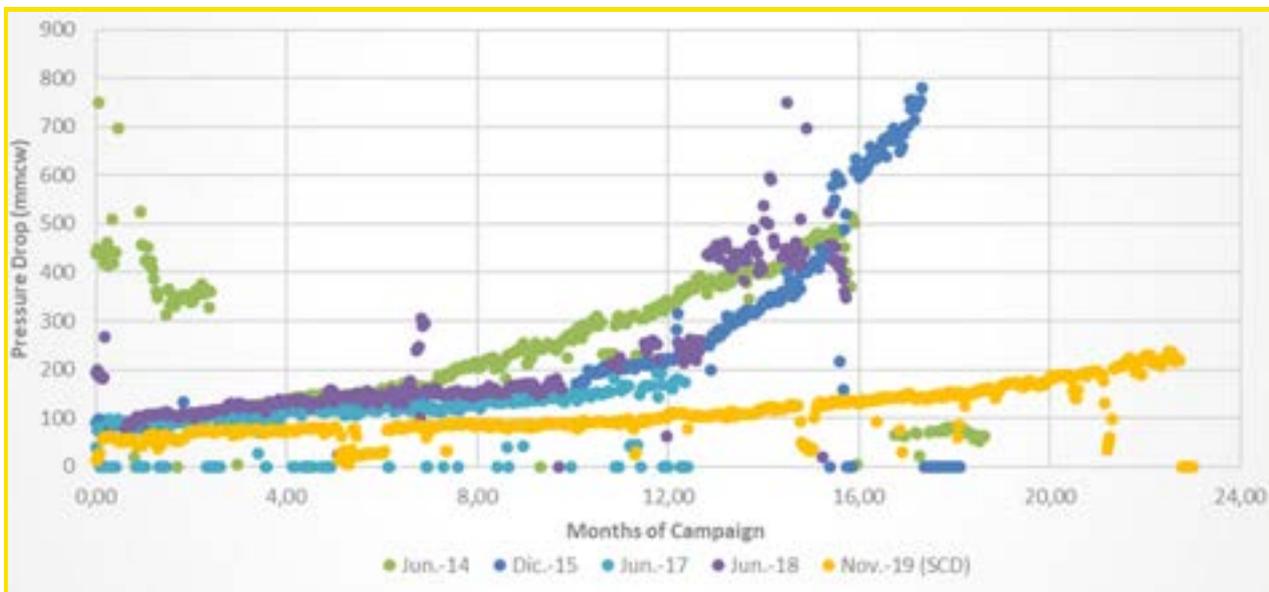


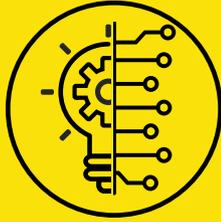
# Successful Application

Facing **frequent shutdowns** due to rising pressure drop across their **catalytic converter**, an H<sub>2</sub>SO<sub>4</sub> production plant turned to Sulphurnet for a solution. Implementing our liquid sulfur polishing filter, designed with advanced porous ceramic cartridges, minimized fine particle and ash contamination to **less than 5 ppm**.

This innovation significantly extended the catalytic converter's **operational lifespan**, allowing uninterrupted production for 32–36 months. Sulphurnet's solution integrated seamlessly with existing infrastructure, requiring minimal modifications and reducing maintenance complexity. Our support encompassed the progression from P&ID development through project execution to successful implementation and start-up.

By enhancing **operational efficiency and minimizing downtime**, Sulphurnet's liquid sulfur polishing filters are pivotal in optimizing sulfuric acid production worldwide.





## **INNOVATION**

We embrace new technologies to revolutionize filtration plants, ensuring our clients benefit from the latest advancements.



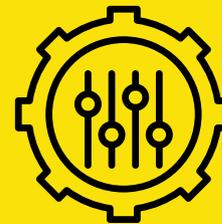
## **DEDICATION**

We are committed to reducing production costs, improving quality, and enhancing safety and environmental performance for our clients worldwide.



## **EXPERIENCE**

With over 50 years of combined experience in sulphur melting and filtration technology, we provide reliable solutions backed by a proven track record, ensuring excellence and trust in every project we undertake.



## **TAILOR MADE**

We specialize in custom filtration systems tailored to each client's unique needs, ensuring optimal performance and seamless integration.

# GET IN TOUCH TODAY

Sulphurnet offers an **all-in-one design package** that covers every stage of your project for sulphur processing plants, from the initial kick-off meeting to post-completion after-sales support.

We are dedicated to **more than just filtration systems**; our mission is to help customers worldwide **reduce** production costs, **enhance** product quality and yields, and **improve** Safety, Health, and Environmental performance.

## Contact us:

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**More than 150 clients in  
more than 45 countries.**

**GET IT RIGHT THE  
FIRST TIME**

