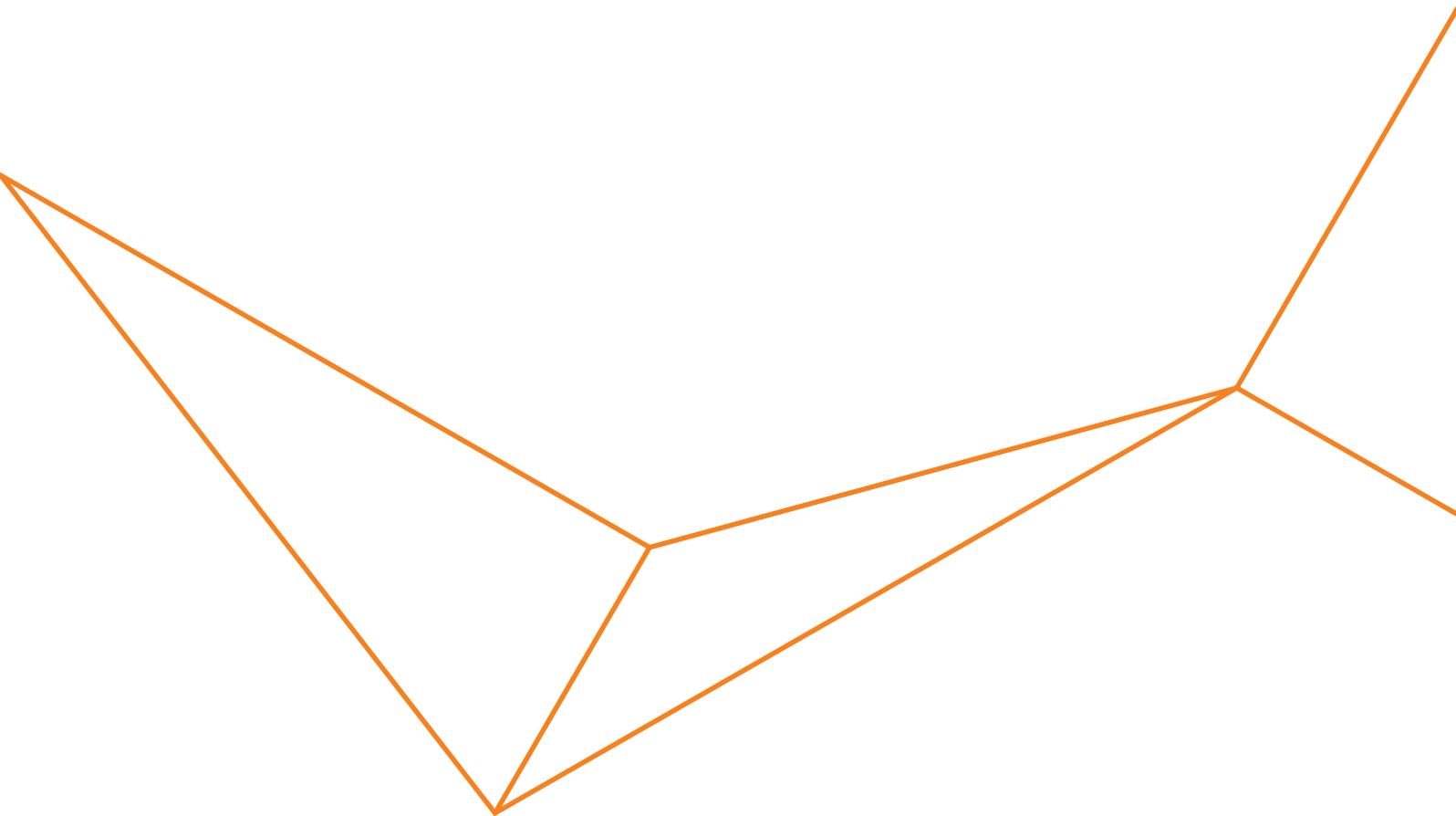
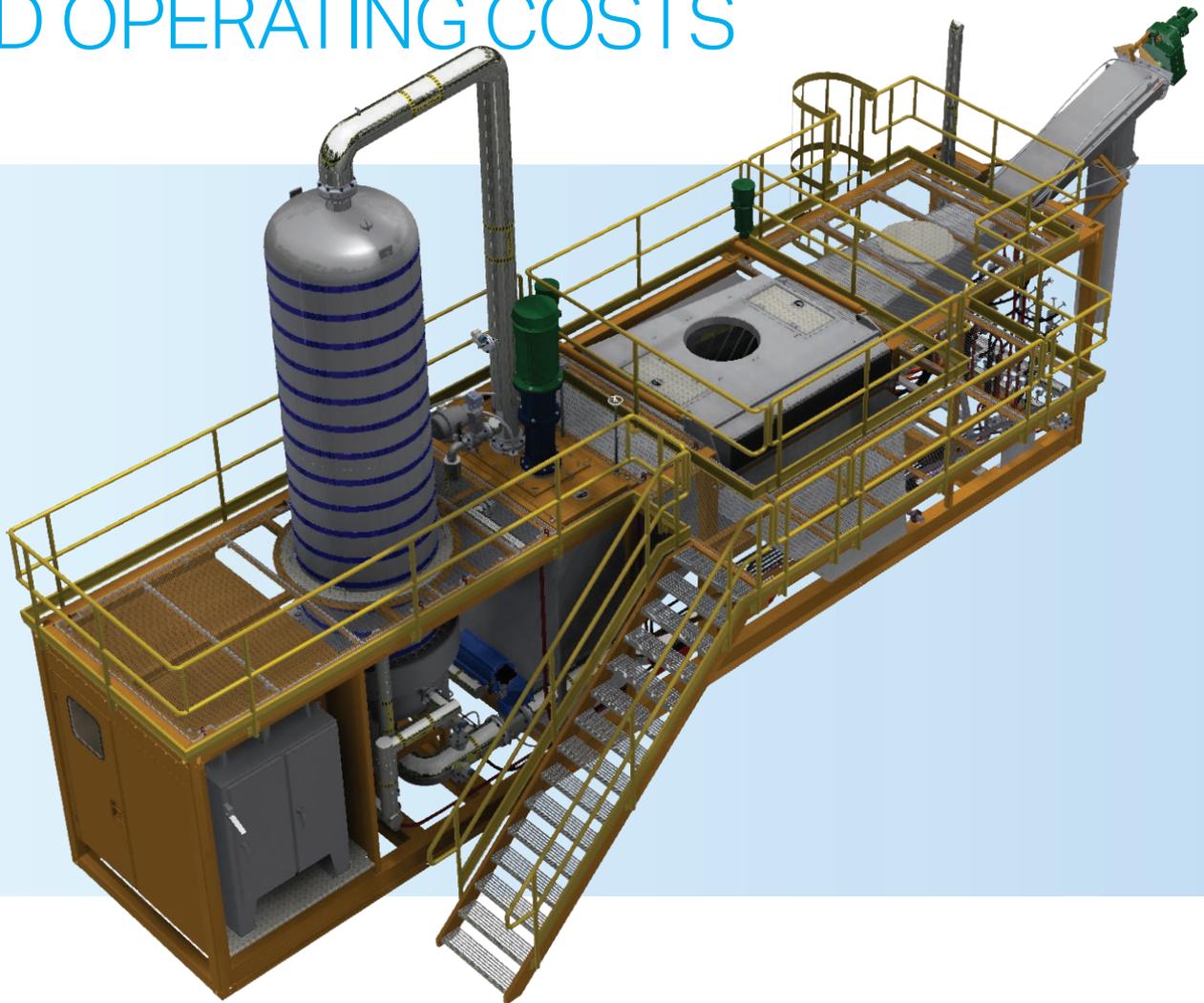




# BRIMROCK SULPHUR REMELTERS



# HIGH PERFORMANCE, SKID-MOUNTED REMELTERS WITH LOW MAINTENANCE AND OPERATING COSTS



## **EFFICIENT REMELTING AND DECONTAMINATION AT UP TO 35 MTPH**

The Sandvik Brimrock SR800™ is a versatile and compact unit offering predictable, high capacity throughput for the efficient remelting and decontamination of sulphur. Nominal capacity is 35 metric tonnes per hour (mtp) with feed sulphur moisture content of less than 5% and minimum contaminate levels.

For sulphur with higher contaminate levels (up to 5%), we offer the Sandvik Brimrock CSR575™.

Skid-mounted for easy transportation by truck, sea or rail, both models benefit from self-cleaning features and an interactive process control system, ensuring maximum throughput rates and decontamination capability throughout a wide range of waste sulphur moisture and contaminate levels.

The self-cleaning features also ensure optimum heat transfer and decontamination capability under all conditions, while the control system maintains the process parameters within ideal ranges to get the most out of every kW of energy used.

## **RELIABLE OPERATION WITH MINIMAL MANPOWER REQUIREMENTS**

Solid sulphur is melted in a settling tank while heated liquid sulphur is recirculated through the tank, aiding in the melting process.

The heavier contaminates settle out of the molten sulphur and are continuously removed and concentrated via a sludge extraction conveyor.

In the CSR575™ the molten sulphur then flows to a secondary settling tank where more contaminates (>0.45 mm) are removed prior to

pumping through a two stage filtration system to remove the last of the entrained particulates.

A single PLC manages key parameters such as temperature, feed rate and tank levels through interdependent control loops, with additional analogue instrumentation monitoring other, non-critical parameters. The result is a steady-state operation at the highest levels of productivity and efficacy. Data collection, reporting and storage will be tailored to your specific requirements.

- Predictable, maximum throughput rates
- Efficient use of energy
- Maximum settling capability, resulting in reduced particulates at the filters and mitigating potential for downstream contamination

# DESIGNED FOR LOW COST, HIGH PRODUCTIVITY REMELTING UNDER ALL CONDITIONS, WITH INTERACTIVE PROCESS CONTROLS ENSURING OPTIMUM PERFORMANCE

- Reduced sulphur concentration in recovered contaminants
- Fully instrumented and process controlled resulting in hands-free operation
- Easy to use controls, including ESD and process trend data collection
- Metered and data-logged re-melt rate
- Low operating cost; minimal manpower requirements
- Low maintenance cost; all stainless steel construction, proven pumps, instruments and filters suitable for sulphur service, robust design
- Environmentally and HSE friendly; low exposed molten sulphur surface area, fume hoods and dilution fans, continuous, low dusting feed system, reduced potential for sulphur spills, limited manual labour or exposure to potential hazards – no manual contaminate removal required
- Cold weather protected; insulated, fully steam traced, electrical tracing on steam traps and condensate lines
- Self contained, compact, portable and flexible; skid mounted, fully wired, all piping installed, single battery limit connection, convertible to a twin tank arrangement
- Designed and constructed to meet all regulatory requirements world-wide; will meet or exceed International and North American codes and standards, CE Certified, ATEX compliant and SIL rated equipment and instruments

## WASTE (EFFLUENT) GENERATION

The design basis for the remelter assumes that the discharged waste will contain 50% sulphur and 50% contaminants. This ratio can be affected by the particle size distribution of the solids as finer material will have more particle surface area that can be 'wetted' by molten sulphur.

The remelting system is capable of removing contaminants such as stones, foreign debris, sand, and soils. The coarsest material will be discharged from a filter basket (>6 mm), small material will be discharged from the screw

UTILITIES AND PLOT SPACE			
		SR800	CSR575
■ Remelter footprint		12m L x 2.5m W x 5m H	16m L x 8m W x 5m H
■ Primary skid wt.	(dry)	22,680 kg	22,680 kg
	(wet)	47,680 kg	47,680 kg
■ Secondary skid wt.	(dry)	-	21,750 kg
	(wet)	-	46,750 kg
■ Sulphur remelt rate		35 mtph*	25 mtph*
■ Sulphur discharge pressure		0 – 500 kPa(g)	0 – 500 kPa(g)
■ Sulphur discharge temperature		<150 °C	<150 °C
■ Steam flow @ standby		430 kg/hr	430 kg/hr
■ Steam flow @ normal operation		5,500 kg/hr	4,000 kg/hr
■ Steam pressure		800 kPa(g)	800 kPa(g)
■ Electrical power – connected		60 kW	70 kW

\*Assumes <5% moisture, and 0 °C ambient conditions

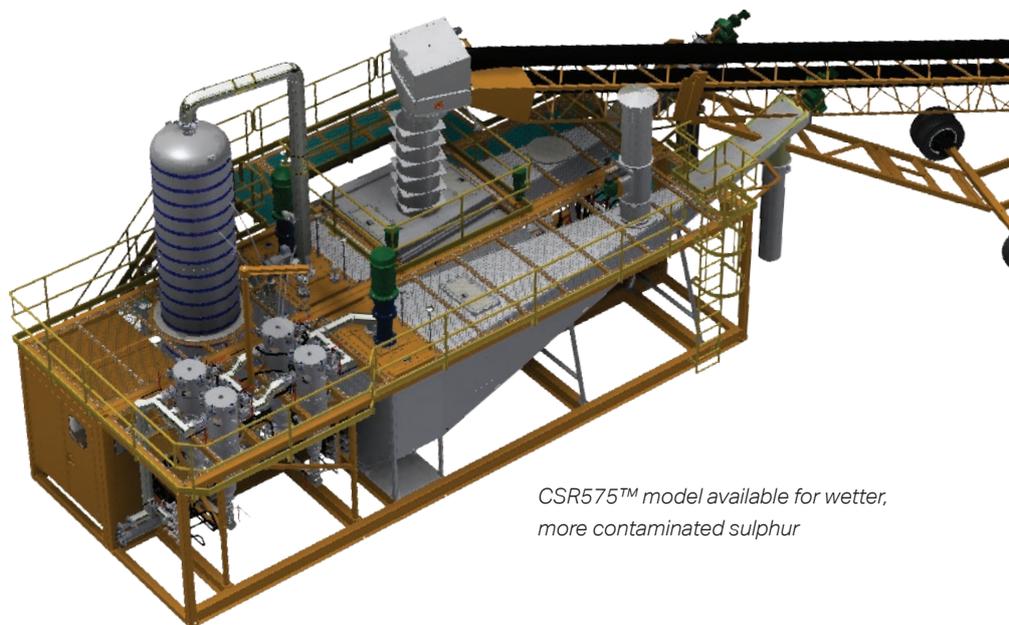
conveyor (>1.25 mm) and the finer contaminants discharged with the melted sulphur.

An optional duplex or quadplex filter system can be used to remove finer contaminants.

The result is molten sulphur that meets or exceeds the following purity specifications, allowing the recovered sulphur to be re-introduced into the supply chain:

## PURITY SPECIFICATIONS – SOLID ELEMENTAL SULPHUR IN BULK

■ Ash (max)	0.050% (500 ppmw)
■ Carbon (max)	0.025% (250 ppmw)
■ Free sulphur (dry basis)	99.90% min
■ Colour	Bright yellow



CSR575™ model available for wetter, more contaminated sulphur

S-PS430-D-ENG-14



Sandvik Process Systems  
Division of Sandvik Materials Technology Deutschland GmbH, Salierstr. 35, 70736 Fellbach, Germany  
Phone +49 711 5105-0, Fax +49 711 5105-152, E-mail: [info.spsde@sandvik.com](mailto:info.spsde@sandvik.com)  
[www.processsystems.sandvik.com](http://www.processsystems.sandvik.com)