REFRACTORY SOLUTIONS
AMMONIA AND SULPHUR APPLICATIONS

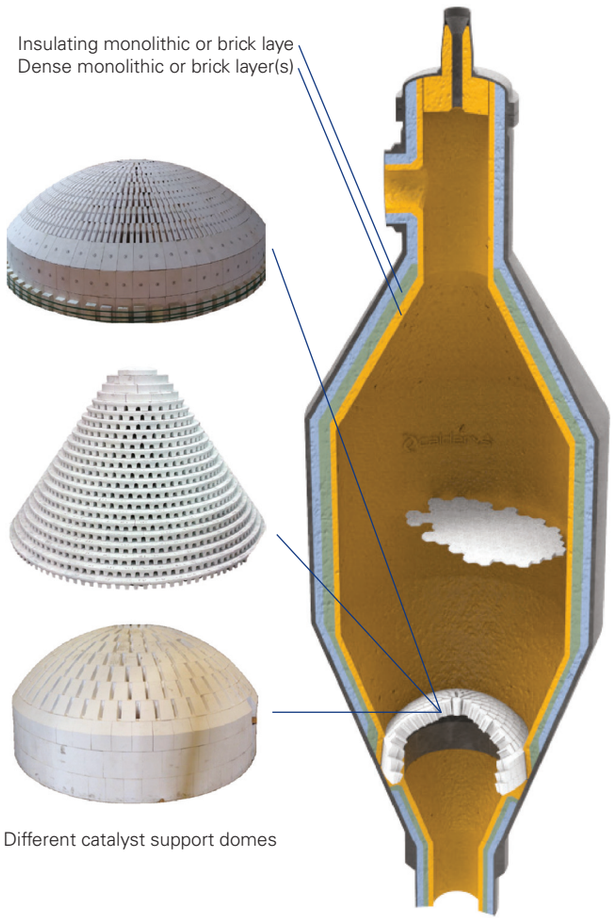
A Worldwide Reach
- We operate globally, with references in Oil Refineries - Natural Gas / LNG - Petrochemical - Fertilizer (Syngas) Plants.

Our Value
- With decades of experience working with top OEM, Licensers and End User companies, we provide high quality monolithic products and bricks combined with customised end-to-end project services.

Our Solutions for Ammonia and Sulphur Applications
- Full product portfolio for Secondary reformer and Sulphur recovery unit Equipments.
- Full detailed design, including 3D modeling and strength calculations.

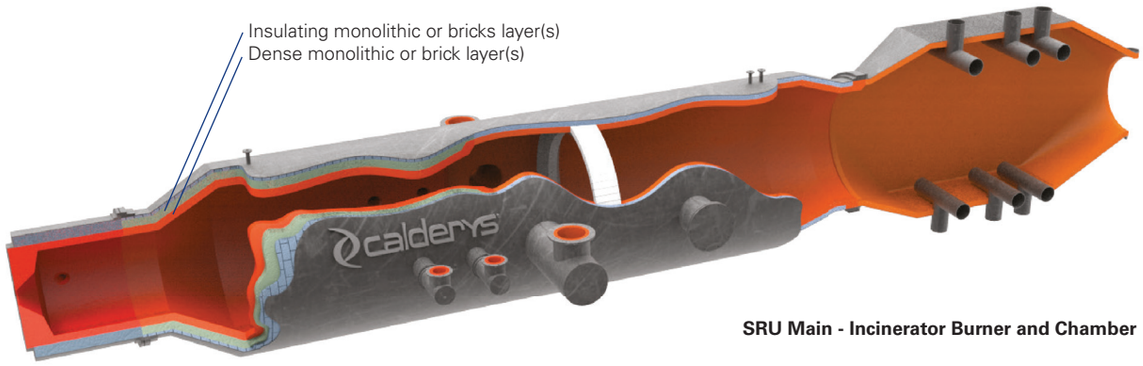
Our Products
- Our Insulating and Dense High Alumina and Low Silica castables and bricks can very well withstand both processes of these two equipments.
- Our Monolithic and brick products comply with the requirements as mentioned in the specifications of global OEM, Licensers or End Users for Petrochemical and Fertilizer (Syngas) Plants.

Bricks and Precast Shapes
- In addition to our standard monolithic and brick products, we can also provide special shaped prefabricated, high strength pressed and high fired bricks or precast shapes for the top layer(s) and the support dome.
- For fabrication of such bricks or precast shapes Calderys has 3D printing capacities for the moulds, which can reduce delivery time.



Different catalyst support domes

Secondary Reformer / ATR



SRU Main - Incinerator Burner and Chamber

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REFRACTORY SPECIFICATIONS

Selection of products shall be done in accordance with furnace process conditions. Calderys invites you to fill in a dedicated questionnaire to confirm product selection regarding temperature level and areas subject to flame impacts, thermal cycling, high abrasion.
Selection of product/design shall be done in accordance with shut-down duration requirements; solutions can differ based on the importance of speed. From wet ramming up to sol-gel gun, spray casting or precast solutions can be supplied to lower cost of ownership when production loss per day is of high value.
The performance of the final solution is sensitive to the installation quality, from the equipment performance to the manpower skills/ respect of refractory placement procedures. Calderys invites customers to engage its supervision of the installation work, up to full turnkey solutions to control the overall quality of the project: shutdown schedule, installation, dry-out and furnace commissioning.
Please ensure any product selection and/or design is validated by your Calderys sales representative.

Product name	Type of product	Chemical analysis (avg %)				Max. recom. service temp.	Den-sity at 800°C g/cm2	CCS at 800°C k/m2	Thermal expansion (PLC)
		Al2O3	SiO2	Fe2O3	CaO				
CALDE® BRICK C 90	High Alumina Brick	91,5	7,8	0,3	0,3	1750°C	3,20	1100	0
CALDE® BRICK C 90 FM	High Alumina Brick	91,8	7,7	0,2	-	1800°C	3,15	1000	0,6
CALDE® BRICK C 92 FM	High Alumina Brick	93,0	6,5	0,2	-	1750°C	3,20	900	0
CALDE® BRICK C 95	High Alumina Brick	96,5	3	0,15	-	-	3,35	1200	-
CALDE® BRICK C 95 FM	High Alumina Brick	95	4,5	0,15	-	-	3,30	1100	0
CALDE® BRICK C 99	High Alumina Brick	99,5	0,1	0,1	-	1750°C	3,30	800	1,2
CALDE® BRICK C 99 V	High Alumina Brick	99,5	0,1	0,1	-	1750°C	3,25	1000	1,2
CALDE® CAST 40 TR	Regular Castable	95,0	4,4	0,1	0,1	1820°C	2,65	900	-0,1
CALDE® CAST T 95	Regular Castable	96,0	0,1	0,1	3,6	1800°C	2,74	500	-0,1
CALDE® CAST T 94	Regular Castable	94,0	0,2	0,1	5,5	1800°C	2,58	900	-0,1
SPARLITE 28G LI (CAST)	Insulating Castable	42,8	48,5	0,7	5,8	1800°C	1,40	80	±0,4
SPARLITE 28G LI (GUN)	Insulating Castable	42,8	48,5	0,7	5,8	1540°C	1,51	120	±0,4
CALDE® CAST MW 140 CO	Insulating Castable	96,0	0,5	0,1	3,0	1540°C	1,55	85	-0,2
CALDE® CAST LW 154 CO	Insulating Castable	83,5	0,2	0,2	15,5	1700°C	1,15	50	-0,3
CALDE® GUN LW 154 CO	Insulating Castable	88,0	0,25	0,1	10,5	1700°C	1,15	50	-0,3
CALDE® FLOW MW 170 CO	Defl. Insul. Castable	93,0	0,4	0,2	6,0	1800°C	1,52	150	-0,2
CALDE® GUN MW 170 CO	Insulating Castable	93,0	0,6	0,2	5,6	1750°C	1,70	150	-0,2
CALDE® CAST MW 170 CO	Insulating Castable	96,0	0,5	0,1	3,0	1850°C	1,55	85	-0,2
		Al2O3	**SiO2**	**MgO**	**CaO**				
CALDE® CAST LT 93/1 (PRECAST)	Low Cement Castable (Spinel)	92,5	0,1	5,7	1,5	1750°C	3,08	800	-0,0
CALDE® CAST LT 93/3 (PRECAST)	Low Cement Castable (Spinel)	92,0	0,3	5,7	1,5	1750°C	3,11	1350	-0,0

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