

# NX SulphuRec™

Our solution for the  
purification of crude  
oil and gas

## About NEXTCHEM

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NEXTCHEM is MAIRE's company dedicated to Sustainable Technology Solutions. Leveraging our deep expertise in nitrogen, hydrogen, carbon capture, fuels, chemicals, and polymers, we deliver groundbreaking solutions and processes that fully enable the energy transition.

Building on the rich legacy of our group for over 70 years, we are dedicated to developing and offering technology solutions, processes, basic engineering designs, as well as proprietary equipment and catalysts, to drive global decarbonization efforts forward.

## Committed to environmental excellence

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To reduce the environmental impact of crude oil refining and sour natural gas, industries need sulfur purification technologies. NX SulphuRec™ and NX SulphuRec S.O.A.P.™ represent best-in-class sulphur treatment technologies. NX SulphuRec™ is a comprehensive portfolio of Sulphur Recovery Technologies (SRT), based on Modified Claus and Tail Gas Treatment, constituting the most widely sulphur recovery processes worldwide. These solutions are aimed at reducing the environmental impact of sour gases and, in some applications, they can be properly upgraded for decarbonization.

1. Sulphur Recovery Technologies;
2. Reduction, Absorption & Recycle (RAR)

## Our solution to reduce your environmental emissions

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NEXTCHEM offers license, feasibility studies (FS), process design package (PDP), basic engineering design package (BEDP), front-end engineering design (FEED), digital & post-PDP services such as Digital Process Monitoring (DPM) and Operator Training Simulator (OTS).

NEXTCHEM SRT<sup>1</sup> is the right solution to tackle the higher demand in Oil & Gas desulphurization and the more stringent regulations in terms of sulphur emissions to the atmosphere. With RAR<sup>2</sup> and RAR<sup>2</sup> Multipurpose technologies, the SO<sub>2</sub> emissions can be easily lowered below 150 mg/Nm<sup>3</sup>.

## NX SulphuRec™

Reducing  
the environmental  
emissions associated to  
petroleum refinery and  
natural gas processing

## Applications



### Gas fields

purification of sour gases  
from gas & oil reservoir



### Petroleum refining

purification of sour gases  
and liquid effluent from  
refining of crude oil

## Your benefits

1

### Flexibility

Low level oxygen enrichment,  
RAR<sup>1</sup> Process and RAR<sup>1</sup>  
Multipurpose allow treating  
different type of sour gas  
feedstocks

2

### Efficiency

RAR<sup>1</sup> tail gas treatment  
Technology able to achieve  
99.9%+ sulphur recovery  
efficiency with less than 150  
mg/Nm<sup>3</sup> SO<sub>2</sub> emitted to the  
atmosphere

3

### Robustness

Established track records with  
more than 90 projects for  
sulphur recovery units in gas  
fields and refineries<sup>2</sup>

1. Reduction, Absorption & Recycle (RAR)

2. Executed as Licensor among FS, PDP, BEDP, FEED

# Technical overview

**a**

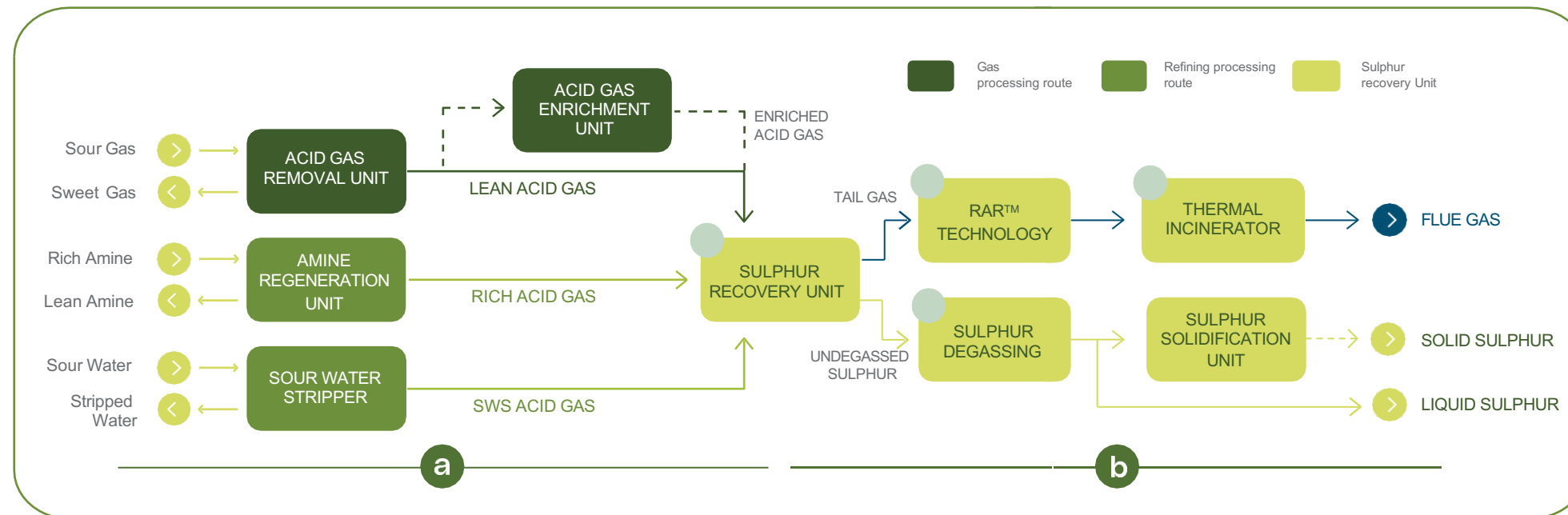
Sour gas streams containing H<sub>2</sub>S and other sulphur compounds are captured from gas fields, petroleum refineries, coal power plant processes and fed to SRU.

**b**

Sulphur Recovery & Tail Gas Treatment recover Sulphur from sour gas streams to reduce harmful emissions and to produce marketable sulphur as by product.



**NEXTCHEM**  
Know-how and  
proprietary technology



## NEXTCHEM sulphur recovery portfolio

- Modified Claus Process
- Oxygen Enrichment
- RAR™ Technology
- RAR Multipurpose™
- Liquid Sulphur Degassing Sub-Dewpoint CBA Process
- Acid Gas Removal
- Acid Gas Enrichment
- Amine Regeneration Unit
- Sour Water Stripping Unit
- S.O.A.P.™

## Key Figures for NEXTCHEM SRT References

- > 50 years experience in Sulphur Recovery
- ~90 projects executed as Licensor among: FS, PDP, BEDP, FEED
- Largest license<sup>1</sup>: 1100 t/d
- Smallest license<sup>1</sup>: 8 t/d

1. Single train capacity