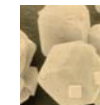




THE *Optisieve* PACKAGE

COMPACT, LONG LIFE ADSORBENTS
AND PARTNERSHIP WITH
CECA SILIPORITE® MOLECULAR SIEVES



THE FULL RANGE OF PRODUCTS AND SERVICES FOR THE NATURAL GAS INDUSTRY

OPTISIEVE 3 : 3A for selective drying

OPTISIEVE 4 : 4A, for drying and methanol removal

OPTISIEVE 5 : 5A, for sweetening and ethanol removal

OPTISIEVE 10 : 13X, for sweetening and BTX removal

Enjoy compact adsorbent beds thanks to high density products with excellent mechanical properties. The bead shape with a strictly controlled particle size distribution insures a low pressure drop.

Together with special recommendations you will be given a long life time guarantee.

All products are industrially proven.



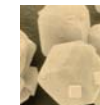


THE HIGHER DYNAMIC VOLUME ADSORPTION CAPACITY,
THE ADVANTAGE OF THE OPTISIEVE PRODUCT RANGE.

Gain in volume adsorption capacity		
	Versus competition pellet shape	Versus competition bead shape
OPTISIEVE 3	+ 19 %	+ 11 %
OPTISIEVE 4	+ 21 %	+ 11 %
OPTISIEVE 5	+ 16 %	+ 7 %
OPTISIEVE 10	+ 6 %	+ 3 %

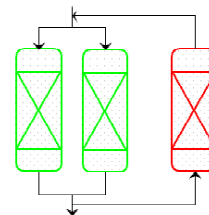
TECHNICAL SERVICES

- Optimized designs for new units / projects with small footprint, particularly interesting for Floating LNG (FLNG) units
- Debottlenecking studies for capacity increase or life time expansion for existing plants
- Loading / Start-up assistance
- Regular performance analysis with plant operation optimization
- Troubleshooting assistance by hotline and onsite inspection



CASE STUDY

Natural Gas Drying for a FLNG plant



Feed / product flow 250 MMSCFD
Temperature 25°C
Pressure 56 bar
Adsorption time 16 hrs

Water saturated, 4A molecular sieves, treated gas used as regeneration gas being recycled through air cooler to the inlet of the unit

	Standard design	OPTISIEVE design	Gain
Int. vessel diameter	2.5 m	2.3 m	8 %
Pressure drop (SOR)	0.3 bar	0.3 bar	same
Bed volume	59 m3	50 m3	15 %
Vessel steel mass	32 t	27 t	16 %
Regeneration flow	22 MMSCFD	21 MMSCFD	5 %

