

## Clean Energy Carbon Capture, Utilization and Storage (CCUS)

H OFFSHORE OIL ENGINEERING

#### CCUS

In the carbon capture, utilization, transportation and storage design and technology, CCUS device manufacturing, pipeline design and installation, COOEC has formed a preliminary technical reserve and CCUS engineering construction capacity, and some CCUS technologies have applicated to Enping 15-1 project.



Reinjection storage;

CCUS





- Supercritical phase state CO2 boosting key equipment in gas compressor mounted product and gas compression system process planning field
- CO2 gas liquid separeation and phase state control

Supercritical CO2 gas injection compressor



参数	螺旋卷式	中空纤维式
装填密度 (m²/m³)	300~1000	3000~10000
处理能力	低	高
投资成本	高	低

Offshore CO2 capture membrane separation unit



- To form the processing capacity of the flare gas recovery integration device in offshore oil and gas field
- The booster device for flare gas recycling provides serialized products according to 2 categories and 10 series





Offshore flare gas recovery booster device

**CCUS** 







# <image>

#### Enping 15-1

#### **First offshore CCS application in China**

- CO<sub>2</sub> geological storage capacity: 1.46 million tons
- CO<sub>2</sub> content of reinjection gas: 95%
- CO<sub>2</sub> reinjection capacity: 48x10<sup>4</sup>Sm<sup>3</sup>/d
- Reinjection pressure : 11MPa
- Dehydrating depth:-20°C@11MPaG
- High carbon separator
- Wet gas compressor
- Dry gas compressor
- Molecular sieve dehydration
- Supercritical CO<sub>2</sub> injection compressor





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### THANKS 谢谢

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