

GRAVITATIONAL SEPARATION SYSTEM OF CH₄, CO₂ AND OTHER GASES, THROUGH SALT CAVERNS

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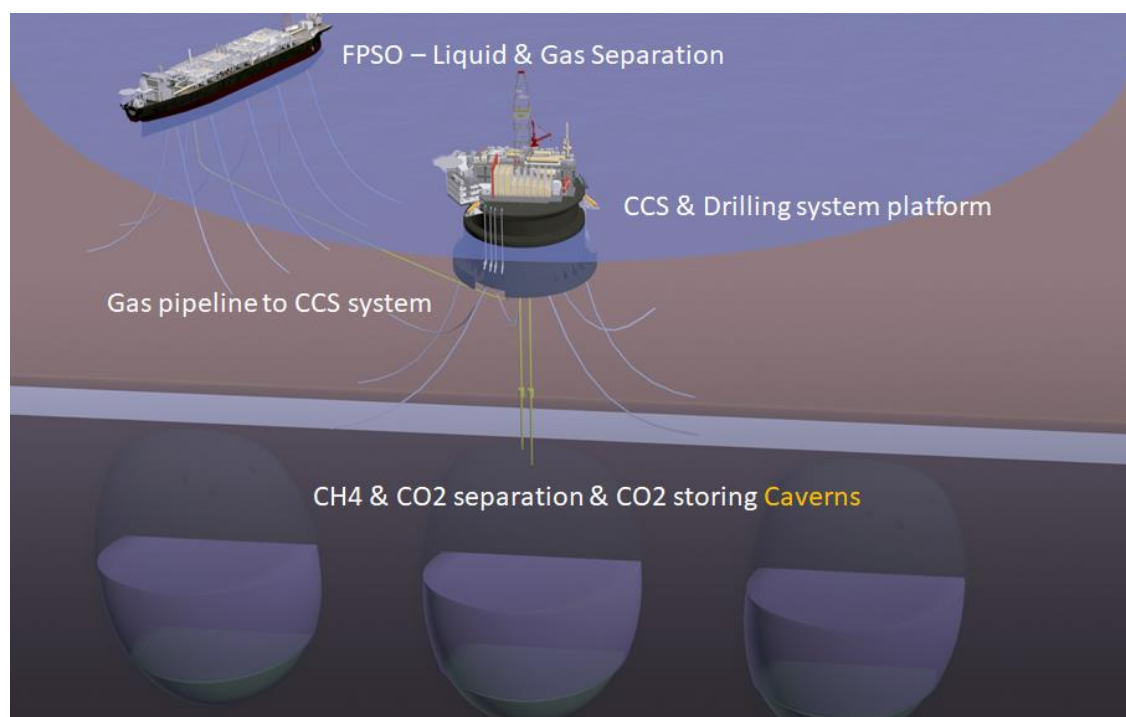
INTRODUCTION

The oil industry is now one of the largest and most profitable in the world. Responsible for the generation of energy and input for the production of chemicals, such as rubber and solvents, the market is constantly increasing. Currently, more than 50% of Brazilian oil production comes from exploitation of the pre-salt fields. However, some fields have the peculiarity of presenting In this way, the industry has started to study technological alternatives to separate natural gas from CO₂ in large quantities, since both CO₂ and CH₄ cannot be ventilated in the environment due to the impact they cause and the policies about the reduction of greenhouse gases emission.

It was through this circumstance that the system of gravitational separation of CO₂ and CH₄ and other gases emerged, taking advantage of the large pre-salt salt rock layers, large caverns are built allowing the capture and storage of large volumes of CO₂ produced during the exploitation of offshore fields. Hence, the caverns act as giant natural tanks. A great benefit of this technology, apart from the fact that it allows the separation and monetization of CH₄, is to be able to make oil production feasible in fields that have already reached the limit of treatable CO₂, reducing the risks and costs of current systems.

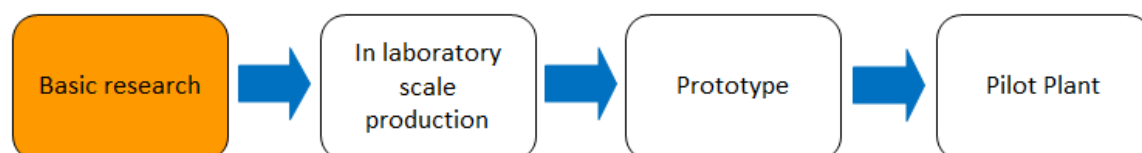
APPLICATION AND TARGET MARKET

The technology serves as a support tool in the Energy area, assisting in the capture and storage of CO₂ produced during the oil exploitation of Brazilian pre-salt fields.



The image shows the drilling and operational control platform of the caverns in operation on the "cluster" of the cavern.

DEVELOPMENT STAGE



Area: Energy and Others 0096/2017 Polytechnic School of USP

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