

CASTOR GAS STORAGE DEVELOPMENT
SPAIN

PIPELINE PROTECTION

Product: Articulated Concrete Block Mattress (ACBM)

Problem

The Castor Underground Gas Storage Development project in Spain re-develops the abandoned Amposta Reservoir as an offshore storage facility that will provide stability and back-up to the gas supplies of Spain in periods of high gas demand.

Furthermore the Castor UGS Project is considered to be one of the preeminent underground gas storage projects in Spain, and essential for the Spanish gas system, as reflected in it being assigned the highest category, 'A' Urgent, in the updated Energy Infrastructure Plan (2005-2011) approved by the Government in 2006.

SAIPEM, on behalf of ACS (Actividades de Construcción y Servicios), a Spanish company dedicated to civil and engineering construction in industrial sectors including Oil&Gas, LNG and re-gasification, constructed a 30" internal diameter offshore pipeline and a Fiber Optic Cable for UGS project.

The 30.5 km pipeline will transport natural gas from the Spanish gas pipeline system to the offshore reservoir and the 31 km fibre-optic cable will connect the offshore platform to the onshore operations plant.

ACBM mattresses were proposed both to enable the crossing of existing pipelines and also to guarantee the required ballast to the pipe and cable.

Solution

Addressing this problem, the suitable solution supplied by Maccaferri for UGS Project was ACBM mattresses with dimension 6.32 x 2.92 x 0.30 m. These Mattresses were able to ensure both stability of the pipeline and at least 30 cm of separation at pipeline and cable crossings

Maccaferri supplied:

- 50 ACBM of dimension 6.32x2.92x0.30m with centerlines and four corner blocks painted in a yellow colour suitable for marine applications to facilitate underwater installation.

The ACBM manufacture was carried out in Maccaferri premises in Leida (SPAIN) and the ACBM Mattresses were delivered at Castellón de la Plana Port.

Thanks to its modular formwork Maccaferri was able to locate the production of ACBM mattresses in the optimal location for efficient and cost effective delivery.

Client:

ESCAL UGS

Main contractor:

ACS COBRA CASTOR UTE

Designer:

SAIPEM

Products used:

ACBM MATTRESS

Date of construction

2011



Project location



Handing and lifting operations of ACBM mattress



Stock of ACBM mattresses

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Officine Maccaferri S.p.A. Global Headquarters

Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy
 T: (+39) 051 6436000 F: (+39) 051 643 6201
 E: info@hq.maccaferri.com
www.maccaferri.com

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