

## **Geotextile Tube solution for Dos Bocas PEMEX marine facilities beach erosion problem at Tabasco, Mexico**

Felix Tseng <sup>1</sup>, Zoe Lin <sup>1</sup>, Alfonso Solis <sup>2</sup>, Marco Sánchez <sup>3</sup>

<sup>1</sup> ACE Geosynthetics, No.33 Jing 3 Rd., C.E.P.Z. Wuchi, Taichung Hsien, Taiwan, R.O.C.;  
Email : sales@geoace.com

<sup>2</sup> Axis Ingenieria S.A. de C.V., c25 #528C x 60 y 62 Alcalá Martín CP 97050 Mérida, Yuc., México;  
Email : info@axisingenieria.com.mx

<sup>3</sup> ML Ingenieria, Sagredo 237, Col. Guadalupe Inn C.P. 01020, Del. Alvaro Obregon, Mexico, D.F.;  
Email : ml@mlingenieria.com

**Keywords:** *Geotextile tube, beach erosion, oil conduction pipes*

### **ABSTRACT**

Mexico is located in the subtropical region. Due to the concentration of strong tropical cyclones, numbers of hurricanes batters the territory all year round. Recent years, with the phenomenon of global warming, hurricanes increase year by year, not only in the quantity but also in the power, and indirectly cause the coastline to fall back, eventually the coastal erosion issue threatens the alongshore structures. PEMEX (Petróleos Mexicanos) is the major oil corporation in Mexico; built along the coastline, its installations are also invaded by hurricanes.

In 1982, PEMEX built up a private port in the Gulf of Mexico south of Dos Bocas port, Tabasco State. The construction of this port blocked the drift sand. After many years of the wave and longshore current effect, the seashore at east side of the port where many oil pipelines were located, turned out in lack of sand source arising the erosion problem and lost its protection. Thus, Dos Bocas coastline was facing severe challenges, how to solve the problem of coastal erosion and oil pipeline protection became the top priority for PEMEX.