



Diplôme d'habilitation à diriger des recherches de l'Université de Nantes

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CONTRIBUTIONS TO INCREASE THE USE OF COMPOSITES AND ADHESIVES IN THE OIL INDUSTRY

Abstract

There has been an increase in the use of structural adhesives and composite laminates in the oil and gas industry recently. The adhesives have some inherent performance advantages over other types of joining, mainly welding. They avoid hot work process, which is one of the main advantages in some areas of the oil and gas industry. They also feature protection against corrosion and the assembly process is faster when compared to other types of joining. This manuscript brings together some works related to applications in oil industry. The Chapter 1 brings a general introduction allowing the reader to understand the most important issues involved in the application of adhesives and composite in such situations. The following chapters compile some works published in scientific journals. They are organized in three sections: Composite repairs, Ageing and Fatigue. This section provides a particular overview of the scientific contribution in this field.