**Design and Analysis of Single Crane hook**

**Abstract—**

Crane hook is very significant component used for lifting the load with the help of chain or wire ropes. Crane hooks are highly liable components and are always subjected to bending stresses which leads to the failure of crane hook. To minimize the failure of crane hook, the stress induced in it must be studied. A crane is subjected to continuous loading and unloading. This may causes structural failure of the crane hook. In the present work, an attempt has been made by considering four different type’s of cross sections of crane hooks and are designed

Theoretically by using curved beam concept. CREO software is used for modeling the crane hook and ANSYS software used to find out the stresses. As a conclusion, the results obtained from ANSYS and theoretical calculations are compared.