NARNARAYAN SHASTRI INSTITUTE OF TECHNOLOGY

PROJECT DETAILS

MODELING AND STRESS ANALYSIS OF DIFFERENT CROSS-SECTIONS OF CRANE-HOOK

❖ **STUDENT DETAILS**:

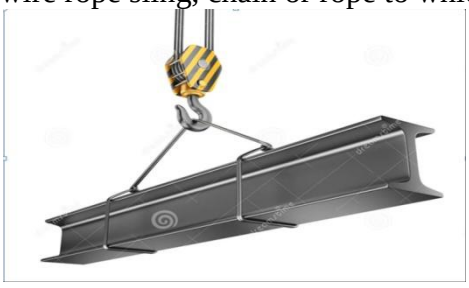
STUDENT NAME	ENROLMENT NUMBER	CONTACT NO.
KIRAN R. PATEL	(110340119003)	9998822163
DHAVAL M. PATEL	(110340119006)	9722803124
HARSH B. PATEL	(110340119008)	8141790242
VIVEK D. PATEL	(110340119009)	9725929050

❖ **WORKING PRINCIPLE**:

Crane Hooks are highly liable components that are typically used for industrial purposes. It is basically a hoisting fixture designed to lift the load for various appliances. Such an important component in an industry must be manufactured and designed in a different way so as to deliver maximum performance without failure. Thus, the aim of the project is to study the different cross-section of crane hook and analyzed the stress distribution pattern and deflection of a crane hook using CREO parametric software and verifies the results of that cross-section. After a hard work we have justified it as per our knowledge and we modeled out modified cross-section which we can reduce the material as well as stress and deflection analysis report.

❖ **APPLICATION**

A **lifting hook** is a device for grabbing and lifting loads by means of a device such as a hoist or crane. A lifting hook is usually equipped with a safety latch to prevent the disengagement of the lifting wire rope sling, chain or rope to which the load is attached.



❖ **COMPARISION:**

WEIGHT OF THE REFERENCE PRODUCT: 11.8 KG
WEIGHT OF THE OUR MODIFIED CROSSECTION HOOK: 10.8 KG

❖ **PROJECT GUIDE(INTERNAL)**: Prof. KULDEEP PATEL
(CONTACT NO: 9586762520)