Process and Engineering  
Title: **Toppling of Crane**  
Location: **Maintenance site**  
Type: **High Potential Near Miss Incident.**  
Result/ outcome: **Financial loss, no injury**

**What Happened?**
A 75-ton rough-terrain crane was undergoing maintenance when the fully extended boom (about 150 feet long) was placed at an angle of about 25 degrees. The crane tipped forward with the boom tip coming to rest on the ground. No injury was reported.

**What Caused It?**
- Safe operating procedure was not followed.
- Load chart of the crane was not followed.
- Boom extended beyond specified range corresponding to the boom angle (Ex. Non-operating zone as highlighted yellow in the range diagram below)

**Corrective Actions:**
- The operator must read and understand the owner’s manual and load chart of the crane before operating the crane.
- The foot notes in a load chart must also be understood prior to operating the crane. Each crane’s load chart will have specific foot notes pertinent to the particular crane type that must be taken into account to ensure safe operation of the crane.

*This alert is based on the Investigation report submitted by Refinery and published for information purpose only. This information should be evaluated to determine its applicability in your operations, to avoid reoccurrence of such incidents.*