

Crane Boomstop

RATIONALE

J220 has been reaffirmed to comply with the SAE five-year review policy.

1. **Scope**—This SAE Recommended Practice applies to the boomstop for the main boom of all mobile construction type cranes having rope supported booms, equipped for hook work, clamshell magnet, grapple, or concrete bucket attachments.
 - 1.1 **Purpose**—The purpose of the document is to establish performance standards for crane boomstops.
2. **References**—There are no referenced publications specified herein.
3. **Definitions**
 - 3.1 **Boomstop**—A boomstop is a device which limits the normal angular movement (generally upward and backward) of the crane boom with respect to the machinery base on which the boom is mounted. Boomstops are installed for the purpose of protecting the crane operator and minimizing damage to the machine or other property in the event of an accident from causes such as the following:
 - a. Sudden release of all rated loads due to failure of the load line or rigging due to operator error;
 - b. Wind forces on a high boom;
 - c. Traveling on uneven ground of steep grades with the boom at a high angle;
 - d. Failure to stop the load hoisting function before the load block or load contacts the boom tip (two blocking);
 - e. Failure to stop the boom hoisting function at the upper limit of boom operating range.
4. **Performance Requirements**
 - 4.1 The complete boomstop with supporting attachments shall be designed to meet or exceed either or both of the following criteria:
 - a. The boomstop shall be designed to develop the ultimate strength of the boom in bending at the point where the boomstop acts on the boom.
 - b. The boomstop shall be designed to absorb all the energy imparted to it by the boom under the condition of 3.1(a) which delivers maximum energy to the boomstop.

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