

STRUCTURE

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OCTOBER 2019

Bridges

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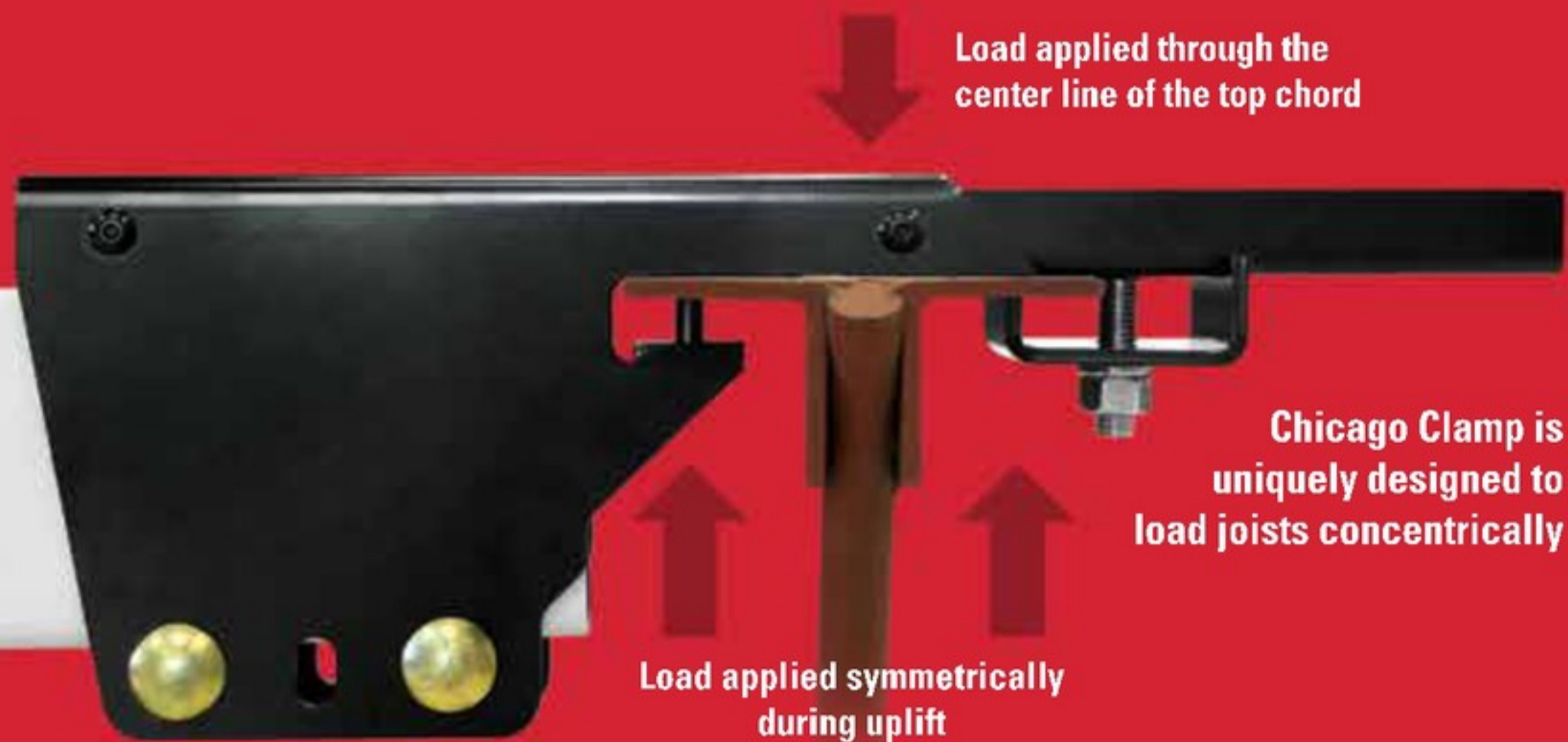
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A Steel Joist Is A Beautiful Thing. Why Not Treat It Right?

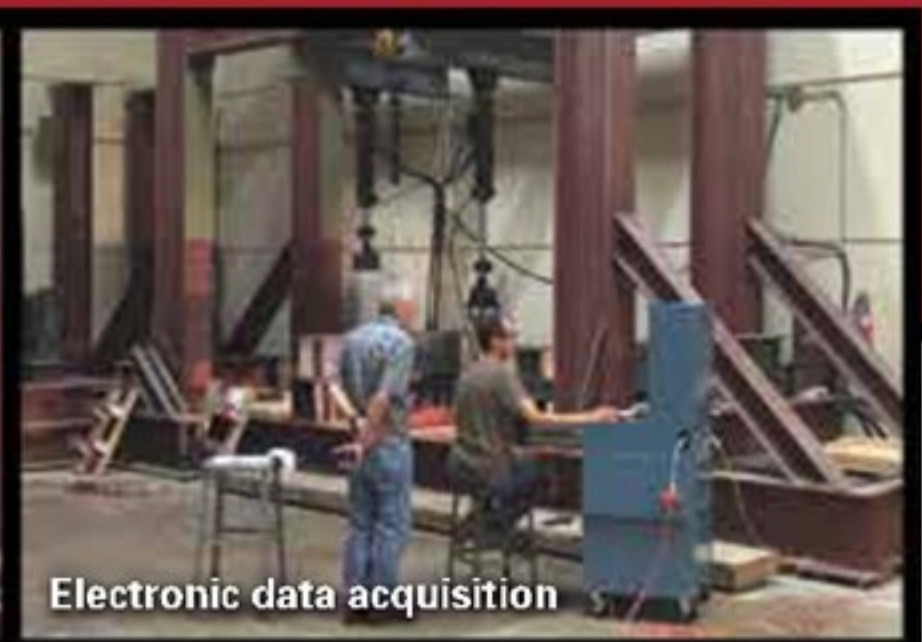
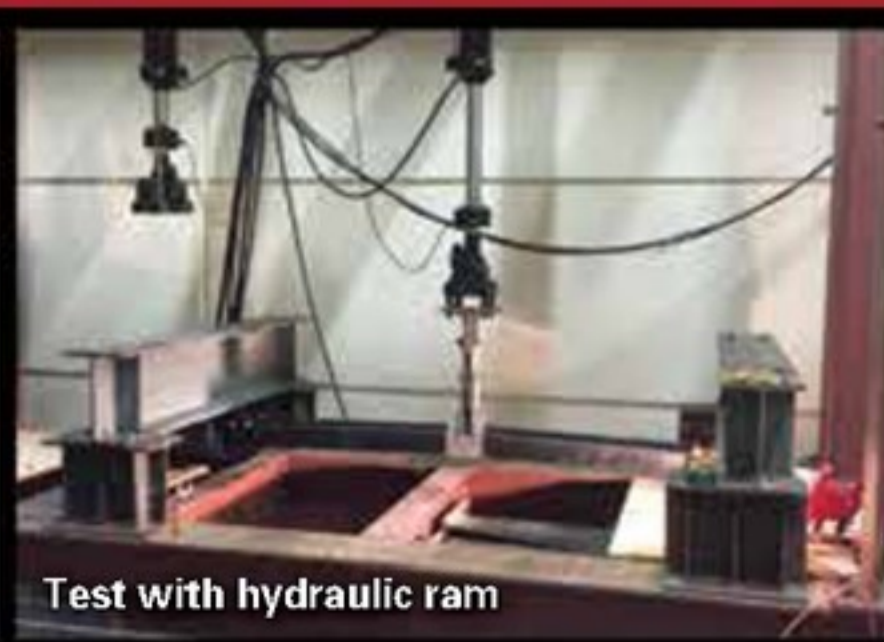
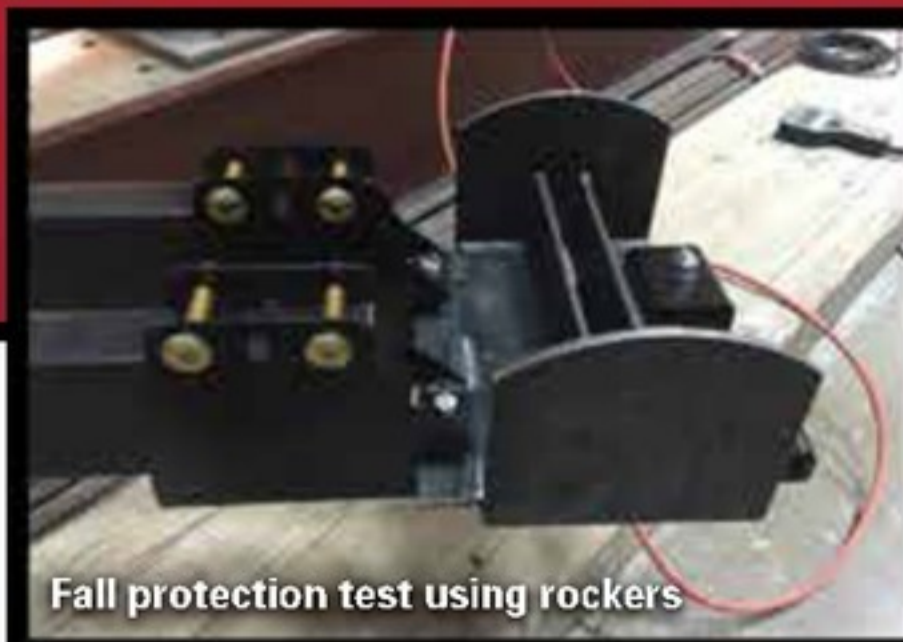
*"The design of open web steel joists is based on concentric loading.
Asymmetrical loading can reduce joist strength."*

- Steel Joist Institute

Treating a steel joist right requires loading joists in accordance with their design criteria. Loads must be applied to both chord angles without creating a torsional moment. With that fact in mind, **Chicago Clamp Company** has designed and tested their Tube Framing Clamp System.



- The clamp's strength and stiffness transfer the load vertically to the center of the joist's top chord in download and transfer symmetrically during uplift.
- Testing was performed using rocker end-attachments to avoid reliance on torsional strength of the joist chord.
- Clamping to joists avoids possible detrimental effects of welding to joists that are under stress due to loading.
- Clamping has the economic benefits of reducing labor costs, reducing installation mistakes, and reducing job delays (associated with locating and sizing curbs and openings prior to steel joist installation).



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