

# Arch Beams: Potential Danger



Arch beam (castellated beam) is a type of crane that has cut outs in the web and could look like the one in these images. If the web is not continuously welded to the lower flange it is a castellated beam. Though it hasn't been manufactured since 1962, it is still in use in plants throughout North America.

Companies need to be aware of the possible dangers posed by age and fatigue in the welds of these Arch Beams (castellated beams).

- Cracks in welds and lower T Sections
- Tracks with raised tread worn away
- Most cranes have exceeded their useful life expectancy, but some users see cranes as “timeless”
- Current inadequate crane maintenance regulations may lull owners into a false sense of security about crane safety and/or conditions
- Due to the age of equipment, the exact understanding of a crane's design duty cycle may be difficult to determine without engineering analysis. (i.e. documentation may be missing)

Got Arch Beam? Here is what we recommend:

Our primary recommendation is to Replace All Arch Beams with Tarca® Beams - contact Gorbel at 800-821-0086 or email [info@gorbel.com](mailto:info@gorbel.com)

- If this is economically unfeasible, conduct regular safety audits
- Safety Audits: Steps to a safer and more reliable crane - Use only skilled personnel for the audit
- Identify the highest risk cranes in your inventory by age and cycles
- Study and compare the original design versus the current usage
- Fully inspect every weld in the beam. Through inspections, find discontinuity and then use non-destructive testing
- Benchmark critical components using reliability based maintenance practices and software