

## WHAT STRESS RELIEVING PLATE FABRICATIONS MEANS FOR YOUR COMPANY

ASME Code sections require that fabricators stress relieve some plate fabrications. Stress relieving is a post-weld heat treatment that heats a material to a specific temperature for a specific amount of time, and then cools that material at a slow rate to prevent stress and distortion [1]. Stress and distortion only occur when there is an uneven heating and cooling of the material.

The ASME Code sections contain requirements for stress relieving where they state the specific temperature rates for heating and cooling. The requirements vary with the P-numbers of the material.

As a result of welding processes used to join metals together, the base materials near the weldment, the deposited weld metal, and the heat-affected zone (HAZ) transform through various metallurgical phases.

Depending on the chemistry of the metals, hardening occurs at various temperatures and is dependent on carbon content. This is particularly true in the heat-affected zone (HAZ) adjacent to the weld metal deposit, where the highest stresses are due to melting and solidification results. Stress relieving is designed to relieve a proportion of these imposed stresses by reducing the hardness and increasing ductility. This is the most frequently used form of heat treatment from fabricators.

With a large furnace on-site, Dixie Southern routinely affects these requirements in-house!

[Request a quote](#) today for your steel plate fabrications.

### References

"What is Stress Relieving and Why We Need It." Weldinganswers.com

<https://weldinganswers.com/what-is-stress-relieving-and-why-we-need-it/>

