

Deformation of welding cabinet body



Overview

In this guide, you'll learn the key causes and types of welding deformation, from thermal expansion to angular and wave distortion. At Baosheng Industry, we weld large sheet metal assemblies every day—electrical enclosures, industrial control cabinets, machinery frames, and complex fabrications where. Welding deformation, also known as welding distortion, refers to any change in the shape or size of a workpiece due to uneven heat input and cooling stresses during the welding process. For instance, when welding steel plates, the. Whether you've welded a simple plate or a complex structure, chances are you've encountered parts that no longer fit right after cooling. Weldment distortion – the warping or dimensional change that happens as welds cool – is the quiet troublemaker in many fabrication projects. Sheet metal parts are usually thin (thickness is generally less than 6mm) and have low rigidity. The temperature results will.



Article Content

Aug 07, 2025

Welding Distortion and Warpage

Due to the heat involved in welding, the base metal gets distorted out of shape. This spoils not just the aesthetic appeal of the joint, but also

Oct 23, 2025

Causes and Control Methods of Welding Deformation of Steel Structure

In the welding process of steel structure, some special structural forms will appear wave-shaped or spiral-shaped deformation, which is called torsional deformation.

Mar 13, 2026

Weld Distortion

To prevent or minimize weld distortion, methods must be used both in design and during welding to overcome the effects of the heating and cooling cycle. Shrinkage cannot be prevented, but it can be

Dec 12, 2025

Study on Welding Deformation and Optimization of Fixture Scheme for ...

In this paper, the best fixture scheme for the TIG welding torch of nickel-base solid solution superalloy GH3536 in the welding process is explored. First of all, to meet the extremely

May 02, 2026

IMPROVEMENT OF DYNAMIC AND SEISMIC

PDF | On Jan 1, 2021, Stefano Pagliaro and others published IMPROVEMENT OF DYNAMIC AND SEISMIC BEHAVIOUR OF CABINETS THROUGH

Aug 22, 2025

Welding Deformation | Springer Nature Link

Welding deformation is the shape and size change of weldment (structure) resulted from nonuniform temperature field in welding process. Pursuant to the different time sequence of welding

Jun 14, 2026

Sheet Metal Welding Deformation Analysis and Control

Sheet metal welding deformation refers to the phenomenon that the shape and size of the metal sheet changes due to uneven local heating and

Aug 18, 2025

Investigating Welding Distortion of Thin-Plate Stiffened ...

Because the thermal elastic plastic FEM has the advantage of high computational accuracy, an attempt was made to predict the welding deformation of a large-scale thin-plate welded

Aug 23, 2025

Determination of welding deformation in fillet-welded joint by means of ...

In this study, experiments are performed to investigate the characteristics of welding deformation in the fillet-welded joint. In order to precisely predict welding deformation by numerical

Mar 08, 2026

CNC Stud Welding Machine for Post-Bending Chassis

TATE's CNC stud welding machine delivers precise post-bending welding for cabinets and chassis, boosting accuracy, strength, and production

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Distortion

If a component is welded without any external restraint, it distorts to relieve the welding stresses. So, methods of restraint, such as "strong-backs" in butt welds,

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A new welding distortion analysis method considering inherent ...

In this paper, a novel analysis procedure is proposed to estimate tendon force and welding distortions while considering both transverse and longitudinal deformations simultaneously.

Dec 25, 2025

Research on welding deformation control technology of battery electric ...

The welding process of aluminum (Al) alloy car body has problems such as poor weld quality, low welding coefficient, and large welding deformation. This paper mainly focuses on material

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Welding Deformation: Causes, Effects, and Control

Welding deformation, also known as welding distortion, refers to any change in the shape or size of a workpiece due to uneven heat input and cooling stresses

Jul 06, 2026

Welding deformation:types and control methods

Welding deformation refers to the changes in the shape and dimensions of a component caused by thermal stresses and shrinkage during the welding process is a common issue in

Aug 24, 2025

Research on welding deformation for box girder of

The box girder of a bridge crane is formed by welding. During welding, residual stress and welding deformation will be inevitably generated

Nov 12, 2025

Cabinet Material Mechanics: Strength Influences

Explore the impact of cabinet material on mechanical strength. Learn how different materials affect stiffness and durability.

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Welding Deformation in Steel Structures: Causes,

Learn what causes welding deformation in steel structures and how to prevent it through factory control, advanced welding methods, and strict quality

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Expert Tips: Fixing Deformation in Stainless Steel Welding

Learn effective solutions to fix deformation in stainless steel welding with expert analysis. Say goodbye to welding deformities. Read more now.

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Control Welding Distortion: Effective Strategies Explained

Welding distortion can lead to significant issues in structural integrity and precision. Are you struggling with these challenges? This article explores

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Measurement and analysis of welding deformation in arc welded lap ...

Correlation between material properties and welding deformation of arc welded lap joints were investigated by parametrical numerical simulations.

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Numerical Analysis and Experiments of Butt Welding

In a shipyard, large numbers of temporary pieces are used to align welding lines of a block joint and prevent welding deformations in the block

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30.2. Using the Welding Toolbox Extension

This type of analysis works under the assumption that the welding bodies have volumetric shrinkage between an initial theoretical temperature and room temperature.

Oct 28, 2025

Process optimization-oriented deformation control of large aluminum ...

Predicting and controlling the welding deformation of large aluminum alloy structures are crucial to ensure the accuracy during the manufacturing of high-speed electric multiple units (EMUs).

Aug 20, 2025

Weldment Distortion: Why It Happens and How to

Whether you've welded a simple plate or a complex structure, chances are you've encountered parts that no longer fit right after cooling.

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Reducing Welding Deformation on Large Sheet Metal Assemblies:

At Baosheng Industry, we weld large sheet metal assemblies every day—electrical enclosures, industrial control cabinets, machinery frames, and complex fabrications where multiple

Contact Us

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