

January 9, 2026

RE: Surface Corrosion (Rust) on Structural Steel Shapes

Nucor – Yamato Steel, Co. stores the structural steel shapes we produce both inside in one of our warehouses and outside in our yard. Structural steel shapes that are stored outside will begin to form surface corrosion (rust) selectively where the mill scale layer has been removed (see photographs on the next page). This selective corrosion typically occurs on the flanges and the web depending on several production factors. The photographs below were taken just one month after the beams had been produced and had been store in one of the outside yards at Nucor – Yamato Steel, Co. As the photographs show, there is already an appreciable amount of “orange” surface rust out near the flange toes, on the inside surface of the flanges, and on the web out near the fillet radius after just one month of being stored in an outside environment.

ASTM A6/A6M, the general requirements specification for rolled structural steel bars, plates, shapes, and sheet piling, states in Section 9.1 Note 5:

Unless otherwise specified, structural products are normally furnished in the as-rolled condition and are subjected to visual inspection by the manufacturer or processor. Non-injurious surface or internal imperfections, or both, may be present in the structural product as delivered and the structural product may require conditioning by the purchaser to improve its appearance or in preparation for welding, coating, or other further operations.

We trust that this information will answer your questions regarding surface corrosion on Nucor – Yamato Steel Co.’s structural steel products. If we can be of any further assistance, please feel free to contact us.

