



Trivalent Chromium(Cr<sup>3</sup>)  
passivation/quenching of  
galvanized steel  
workpieces on Batch  
Galvanized Lines

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Case study

- **Client:** Youfa Steel Pipe Manufacturing Co. is a major producer of high-frequency welded pipes, rack pipes, scaffolding pipes, and hot-dip galvanized steel pipes. Until 2020, this client used toxic Cr6 passivation products to treat newly batch galvanized steel parts.
- **Paint point:** Since 2020, the company has systematically evaluated Cr3 products from multiple suppliers with the objective of replacing hazardous Cr6 passivation agents and achieving comparable or superior anticorrosive performance on galvanized components. The majority of Cr3 products tested have delivered satisfactory corrosion resistance for newly galvanized parts stored outdoors, except for storage during the humid summer season.
- **Our solution:** we recommended a diluted version of XTC -300 for use on their batch galvanized line (BGL). After being galvanized, the workpieces were then quenched and passivated in a diluted XTC-300 solution.
- **Customer feedback:** “You don't need to consider the cost of the chromate waste solution. Cr3 passivation steel parts can be safely stacked and stored outdoors, even in humid summer, without risk of storage stains.”

