

# WHAT MADE A PREMIER CONSTRUCTION MANUFACTURING COMPANY CHOOSE TOTC AS THEIR PARTNER IN FABRICATION PROJECT?



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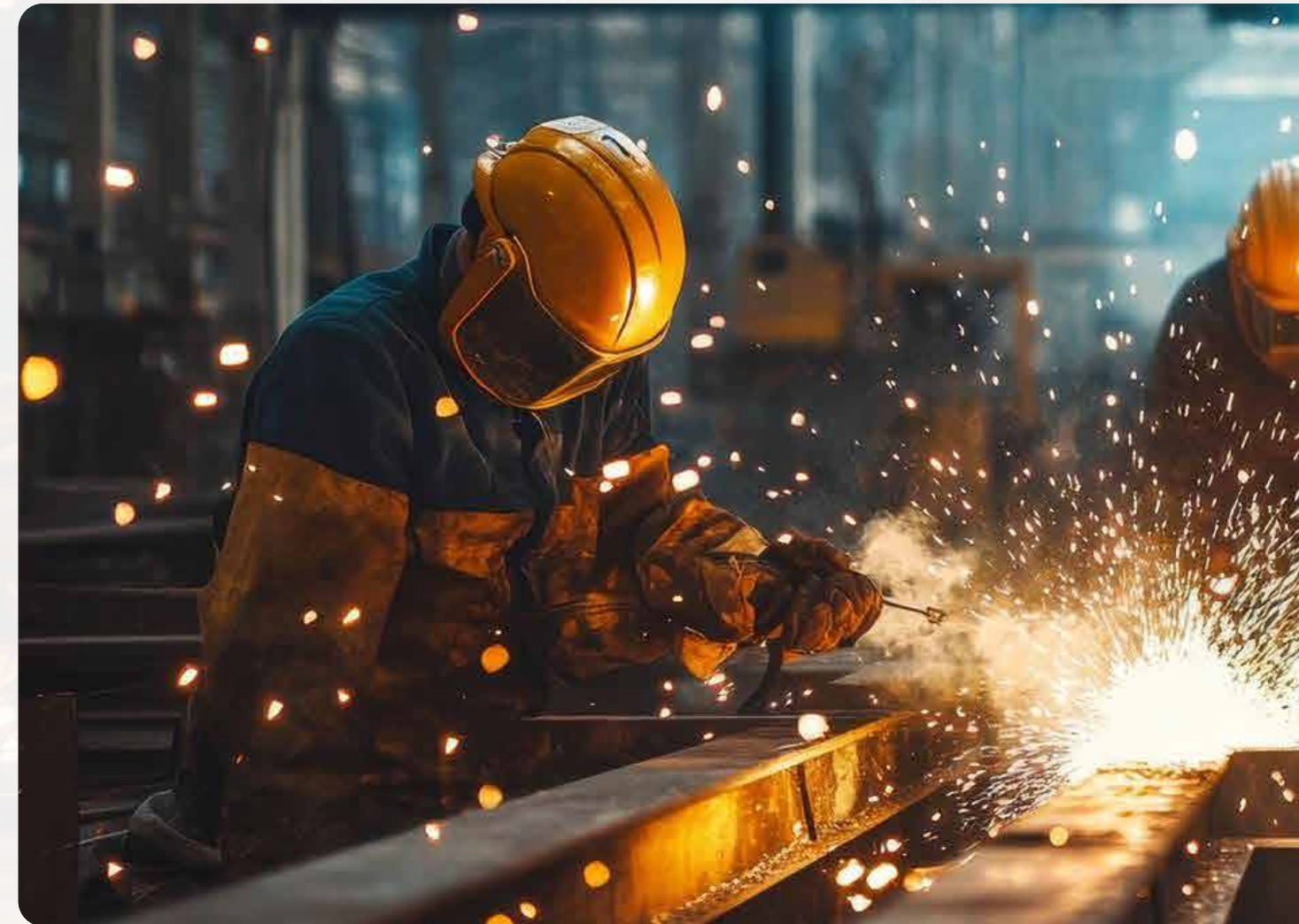
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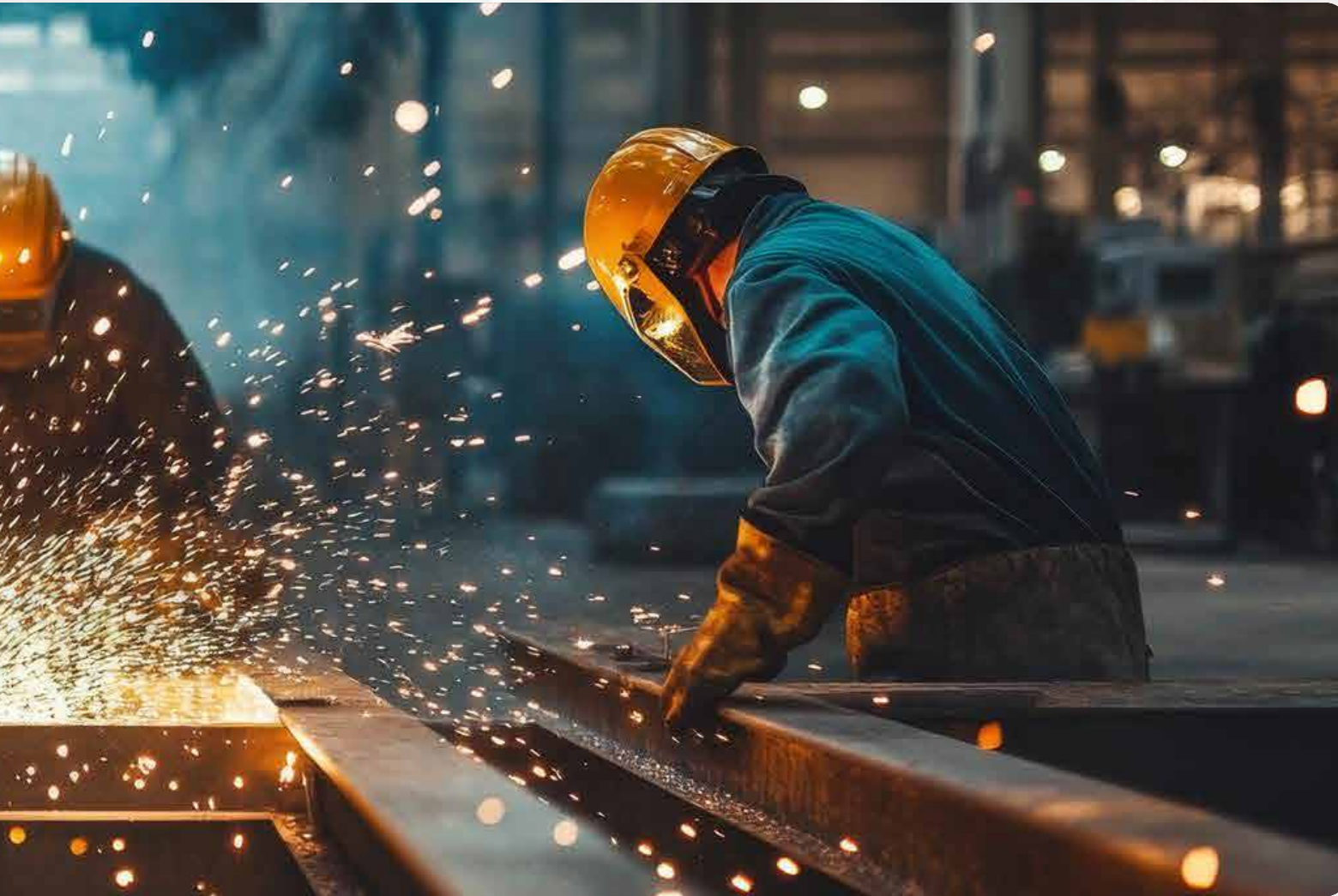
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# HOW TOTC TURNED A DREAM PROJECT TO REALITY THROUGH CUSTOMIZED FABRICATION



## THE CLIENT:

Celebrating 100 years of equipment manufacturing excellence last 2021, Client K has grown to become a global company; with a presence across 140+ countries and operating within the primary industries of construction and mining.

In 2008, Client K established a training and development center in Metro Manila and worked to form a partnership with Filipinos in their field. In 2019, Client K's development center in Metro Manila became a 100% affiliate of the company headquartered in Japan.

This 2024, from a project in Antique by Client K, surfaced a need for 96 pieces of grousers.

As a critical component used for enhancing traction on heavy machinery, the fabrication of these materials necessitated the intricate Gas Metal Arc Welding (GMAW) process, which then also raised the requirement of a partner knowledgeable on precise welding techniques to ensure the durability of each grouser.





## SCOPE OF WORK:

### OBJECTIVES

- To fabricate 96 grousers with high structural integrity and durability.
- To employ the GMAW welding process to ensure efficient, clean, and strong welds.
- To meet all specified materials and consumables for the grousers.
- To complete the project within the designated timeline.

### TASKS AND DELIVERABLES

#### ● Preparation and Setup

Reviewing engineering drawings, procuring and inspecting materials, and setting up welding equipment, including GMAW machines and safety measures initiated the project between TOTC Inc. and Client K.

#### ● Installation of Grousers with Client K's Welders

Welding of steel pieces using the GMAW process to form the grousers was completed care of Client K's team of welders. Following thereafter were the post-weld inspections done to ensure compliance with design and fitting.

#### ● Quality Control with Client K's Engineers

Engineers from Client K's team were present to conduct regular visual inspections, dimensional checks, and strength tests to ensure that the produced grousers met their specifications and durability standards.

#### ● Equipment and Tools Supply

Supply and use of necessary welding equipment, such as GMAW machines, welding wire, electrodes, protective gear, and power tools to facilitate the welding process.



## PROJECT TIMELINE & WORK COMPLETED

- Welding of steel pieces using the GMAW process to form the grousers was completed care of Client K's team of welders. Following thereafter were the post-weld inspections done to ensure compliance with design and fitting.



## WORK COMPLETED

<b>DAY 1 TO 3</b>	Travel and arrival to Semirara MPC Safety Orientation Coordination and preparation to the working area	<b>DAY 11</b>	Grouser completed: 46/96 (48%)
<b>DAY 4</b>	Set-Up of facilities (Welding machines and power supply) Grouser completed: 2/96 (2%)	<b>DAY 12</b>	Grouser completed: 51/96 (53%)
<b>DAY 5</b>	Grouser completed: 7/96 (7%)	<b>DAY 13</b>	Grouser completed: 60/96 (62.5%)
<b>DAY 6</b>	Grouser completed: 12/96 (12.5%)	<b>DAY 14</b>	Grouser completed: 65/96 (67.7%)
<b>DAY 7</b>	Grouser completed: 18/96 (18.75%)	<b>DAY 15</b>	Grouser completed: 74/96 (77%)
<b>DAY 8</b>	Grouser completed: 24/96 (25%)	<b>DAY 16</b>	Grouser completed: 82/96 (85.4%)
<b>DAY 9</b>	Grouser completed: 30/96 (31.25%)	<b>DAY 17</b>	Grouser completed: 90/96 (93.75%)
<b>DAY 10</b>	Grouser completed: 38/96 (40%)	<b>DAY 18</b>	Grouser completed: 96/96 (100%)



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## **SOLUTIONS ENACTED BY **TOTC INC.** TO ENSURE COMPLETION OF THE 96-GROUSER REQUIREMENT OF **CLIENT K** WITHIN THE AGREED TIMEFRAME.**

During the course of the project, it was inevitable for challenges to arise. However, in the face of these issues, TOTC Inc. demonstrated exceptional responsiveness in addressing the hurdles as they surfaced.

In executing these solutions, TOTC Inc. was able to keep operations running smoothly, ensuring the timely completion of all 96 grousers within the 18-day timeframe.





## 1. ENFORCED A MACHINE “COOL DOWN AND RECOVERY” PHASE

Within the 18-day timeframe of manufacturing 96 grousers, the primary issue that arose from the operations concerned the duty cycle on the welding machines. This challenge limited the number of continuous welds that could normally be performed before the equipment entered its cooling period.

Identifying the need for a more stable and efficient power supply to the welding equipment, TOTC Inc. promptly sourced a much larger ground wire and enforced a cool-down period of every after 4 runs to maintain continuous and efficient welding operations.

## 2. OPTIMIZED WORK ENVIRONMENT FOR REFINED WELDING OPERATIONS

During the course of the project, the welding area was affected by strong winds, which brought about accumulated dust and debris that complicated the work environment of the welders.

To mitigate the effects of the strong winds, a request was made for additional safeguarding surrounding the work area. Tarpaulins were put out to act as a shield against dust and debris. Additionally, TOTC Inc. provided double-face masks to protect the workers from the impact of the winds, allowing them to work effectively amidst challenging conditions.

TOTC Inc. made sure to provide direct support so that all logistical and operational challenges of the team were handled quickly in a manner that did not affect the flow of their project.





## **CONCLUSION AND RECOMMENDATION**

In conclusion, this project has been successfully executed, with all tasks completed as per the original scope and timeline. Despite facing several challenges along the way, our team and Client K's team demonstrated resilience, adaptability, and strong problem-solving skills to overcome these obstacles.

Through effective communication, collaboration, and a commitment to quality, we were able to address and resolve any issues promptly. As a result, we have successfully completed the project, meeting all objectives and maintaining the high standards expected.

This accomplishment highlights the dedication and professionalism of the entire TOTC team and Client K's team, ensuring the project's success and contributing to the overall growth and success of the company.