



Professional in Automatic Solutions  
for Tank Prefabrication and Construction

## Tank Bottom Plate Flooring



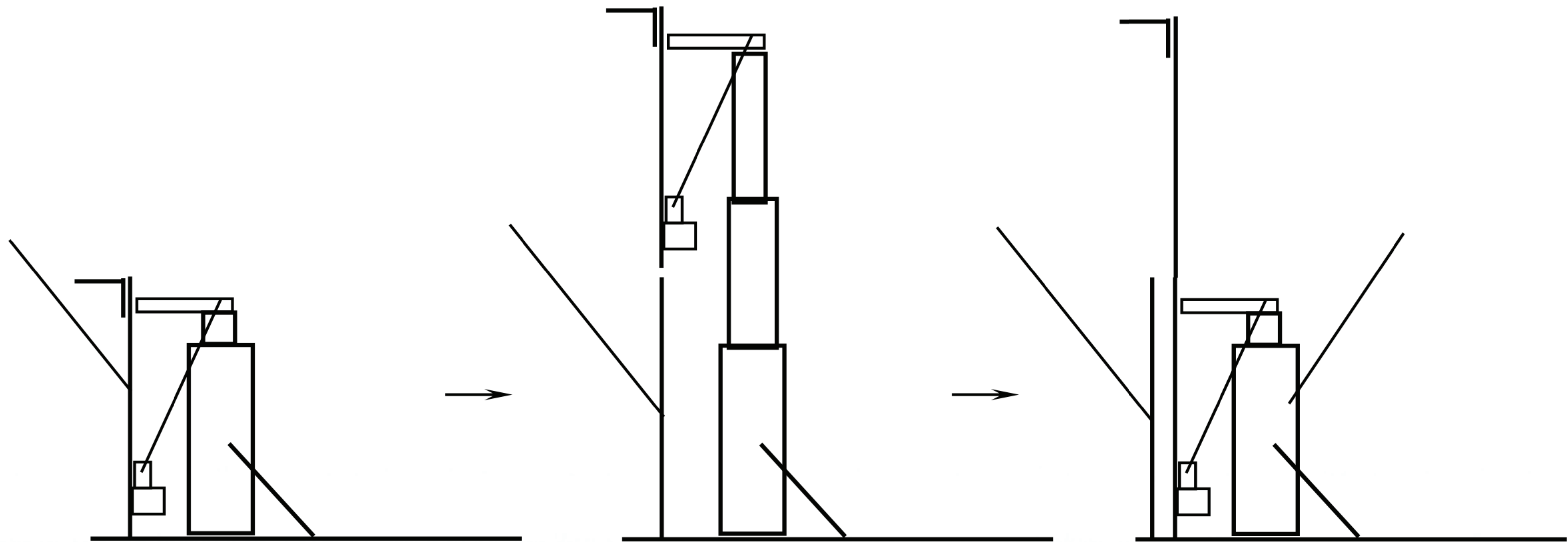
The first step is bottom plate flooring

## Automatic Tank Welding Machines -Automatic Butt/Corner Seam Welder



- Applicable to bottom plate welding using standard M/C
- Adopting sub-arc welding technology
- Can complete butt and fillet type long/short seam welding of bottom plates
- Generally, it needs 2 to 4 sets of such welding machines for one tank

## Hydraulic Lifting System Erection Principle Drawing



A. Install expansion ring and hydraulic lifting system

B. Lift it to the first course height

C. Hydraulic lifting system fall back

## Top Course Set Up And Then Vertical Seam Welding



## Two Tanks Erect At The Same Time



When one tank vertical seam is under welding, another tank is under course forming.

## Start The Third Tank Bottom Plate Flooring When The First And The Second Tank Under Erection



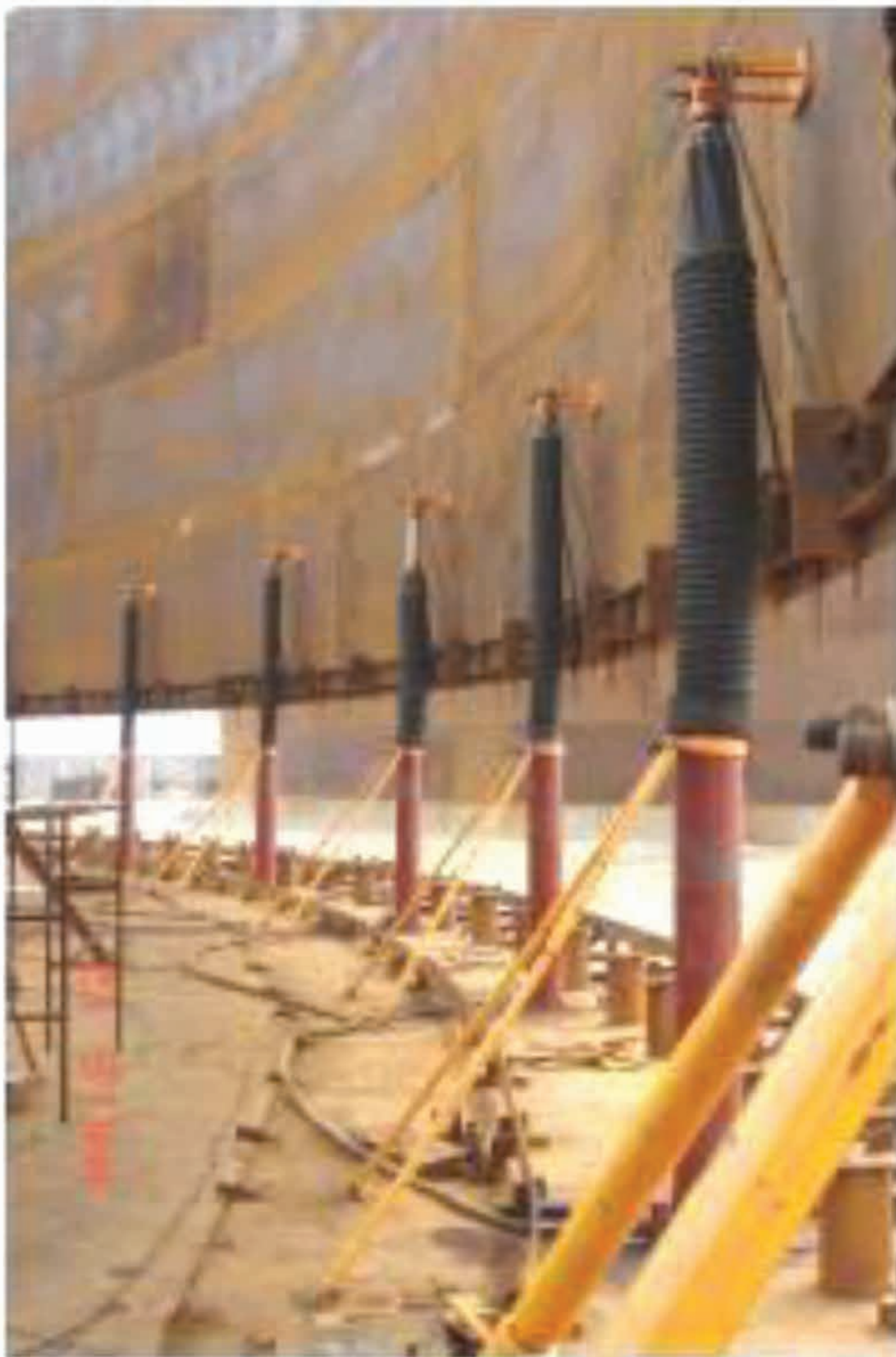
## Tank Erection Method: Top-To-Bottom



Steps: erection of upper course & top second course with bottom-to-top method → roof (fixed type) → erection of courses from top to bottom one by one with hydraulic lifting devices → welding the tank course to bottom plates



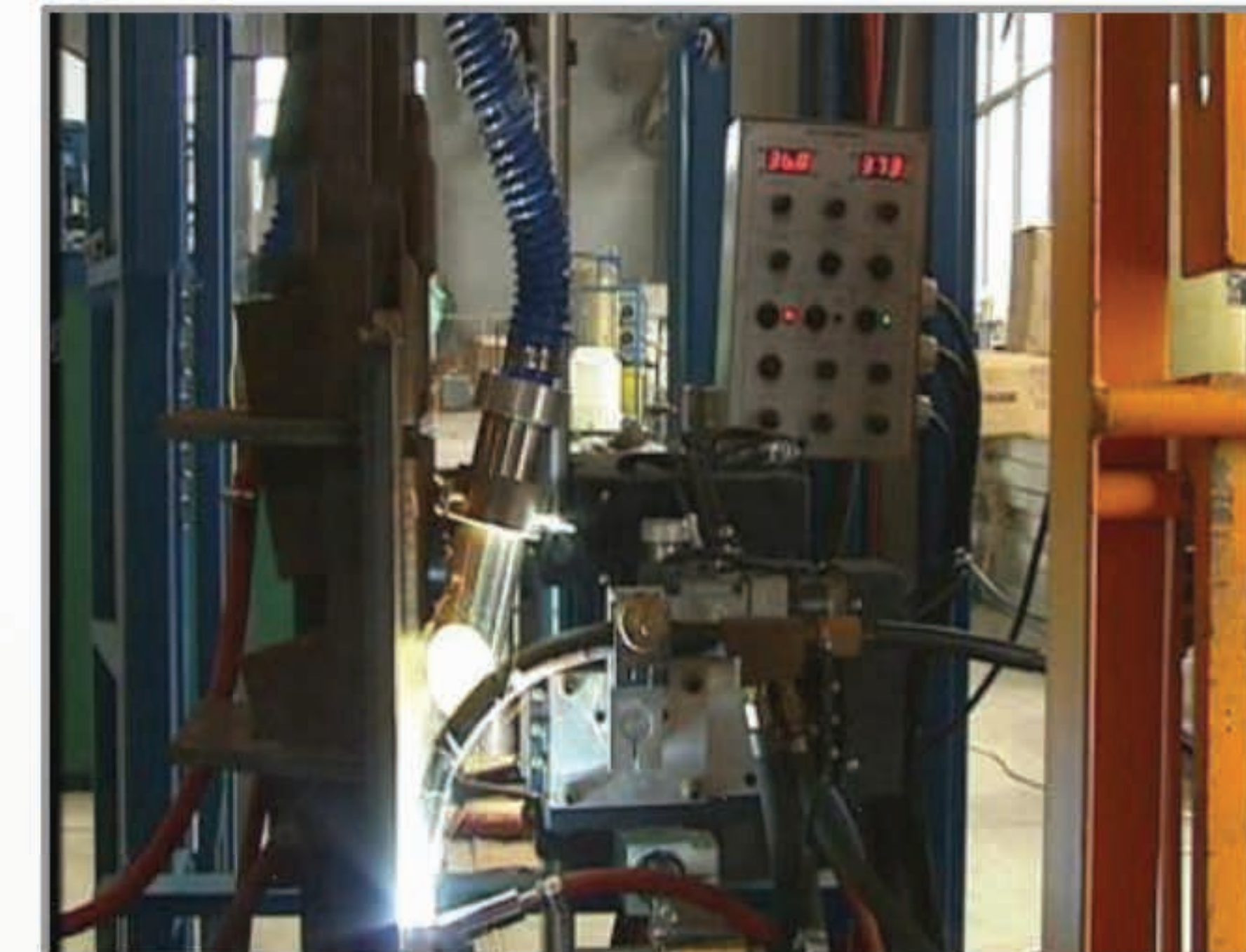
## Hydraulic Lifting System



- Matching with all automatic welding equipment
- Module design, a small hydraulic power pack with 5 cylinders, each module can be connected synchronously each other
- The lifting capacity of each cylinder is 25T(18T,100%) or 15T(12T, 100%)
- PLC control, synchronously lifting
- Inside & Outside Ground Rails ready for welding machines

## Automatic Tank Welding Machines -AUTO EGW In Outside Welding On Ground Rail

- EGW suitable for both erection methods (bottom-to-top and top-to-bottom)
- EGW is just needed for outside vertical seam welding
- EGW Automatic Welder are designed for outside welding, only need one pass welding
- EGW efficiency is 50 times of manual welding



## Automatic Tank Welding Machines -AUTO AGW for Top-to-Bottom Tank Erection

- AGW is applied in both inside and outside girth seam welding for both construction method (top-to-bottom and bottom-to-top)
- For top-to-bottom tank erection, all the machines are laid on ground rails which are set up inside & outside the tank
- First X-Ray qualification rate: above 99%
- Hydraulic lifting system is necessary



## AGW Welding When Inside The Tank



- Inside girth seam welding are taken by Special designed automatic inside girth seam welder, matching with hydraulic lifting device
- When finish lifting, the Hydraulic lifting system will be dropped down, and the inside girth seam welding machine can work

## Welding Effect



Long & Short Butt Seam of Tank Bottom

## Welding Effect



Vertical Seam & Girth Seam

## Corner Welding Between The Lowest Course and Bottom Plate



- Applicable to inside and outside corner seam welding using special M/C
- Special M/C With magnetic idler system, Suitable for outside corner seam welding when the min. distance from outer edge of the bottom to shell is 90mm
- Adopting sub-arc welding technology

## Features of Top-to-Bottom Tank Erection Method

- Generally most work are done on ground, only little work are done in low altitude, and it is more safe when erection tank
- Convenient for materials & tools transmission & course forming, greatly improve the working efficiency of assistant work
- Convenient for staff move and on site management so as to improve the management efficiency
- Convenient for quality control and technology instruction
- The working efficiency improves 30% than bottom-to-top method, greatly shorten the construction cycle



## Assistant Machines with Special Functions

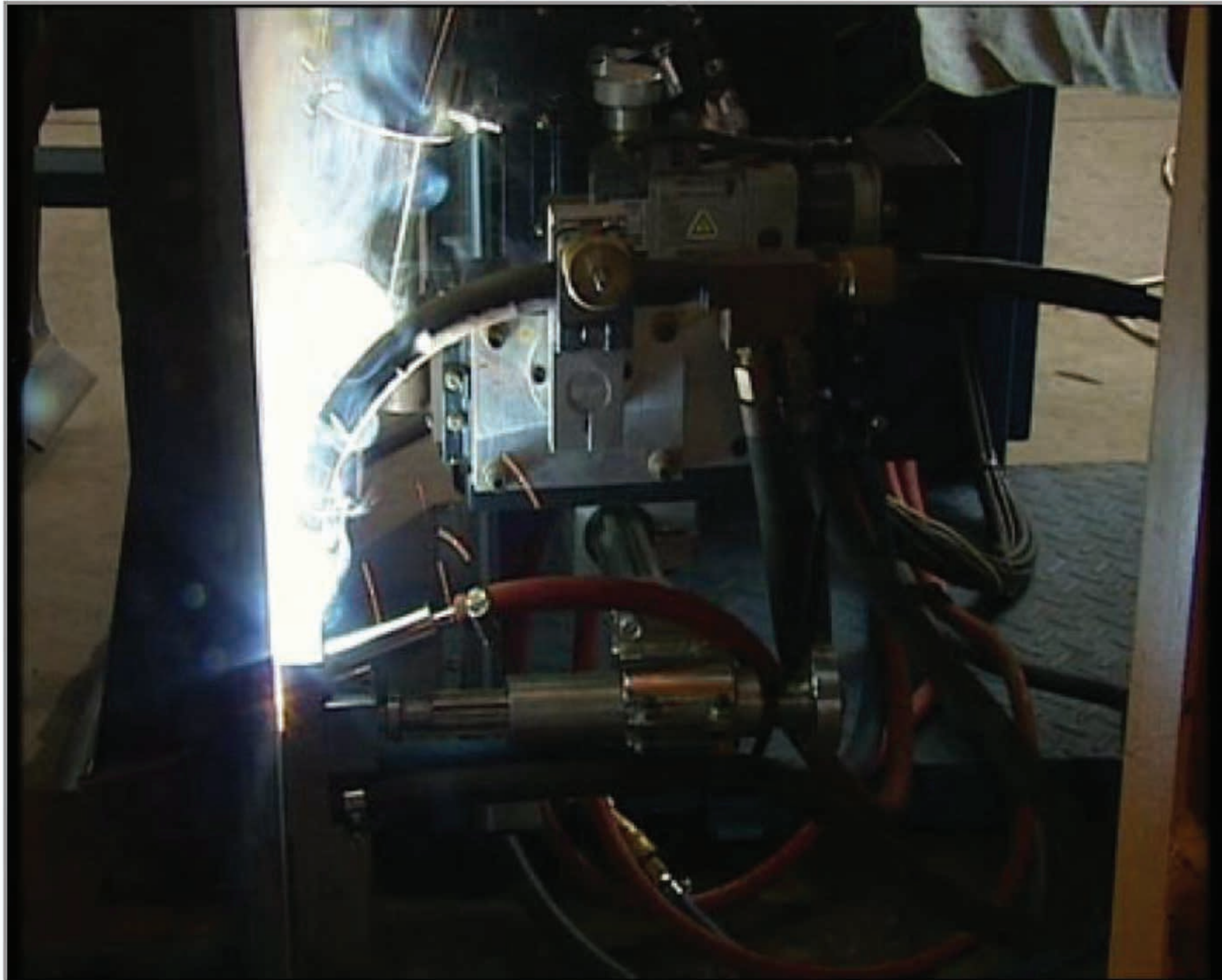


Girth Seam Grinder

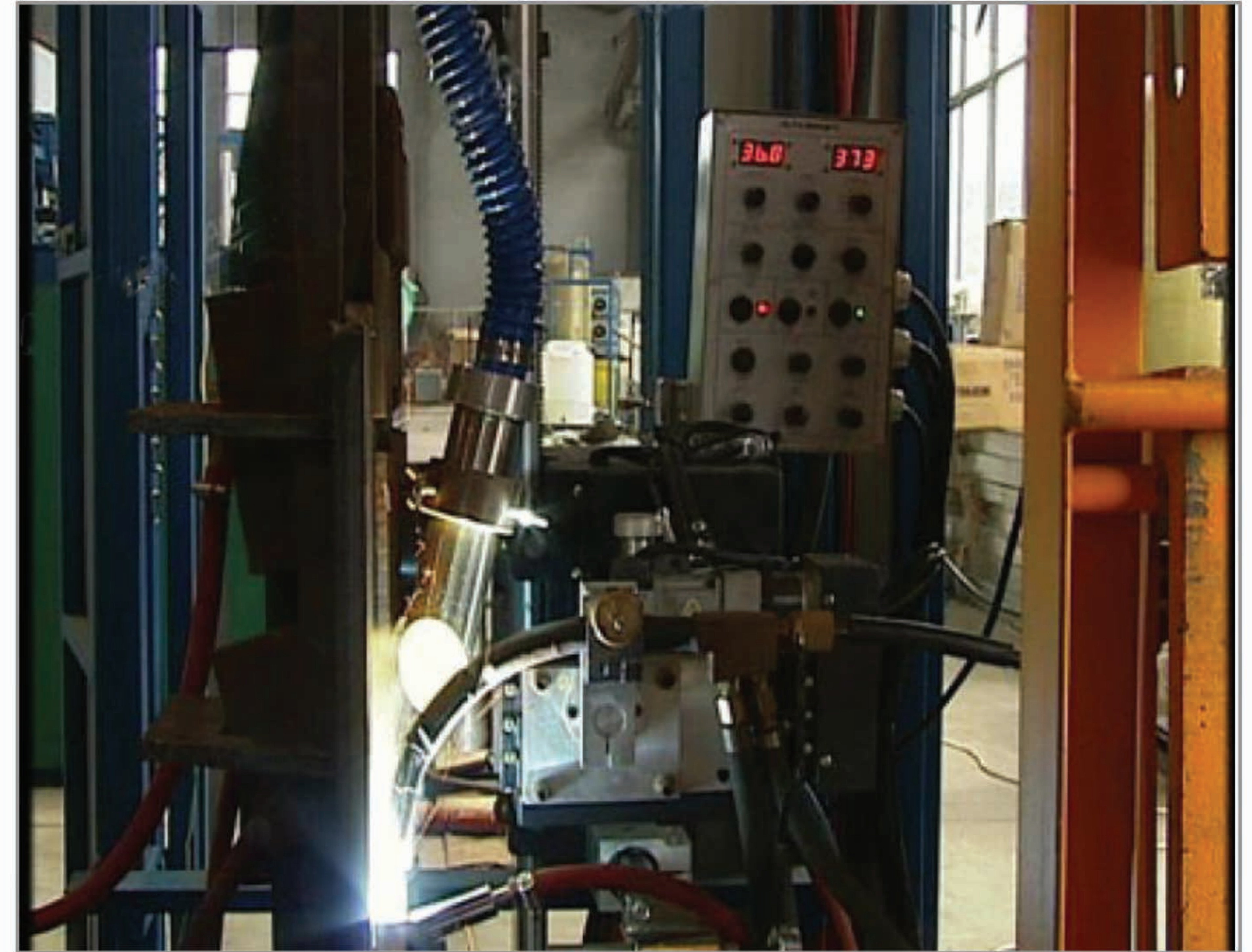


Preheating Torch for Girth  
Seam Welding

## Pioneer in Green ( Eco-friendly) Welding



When welding without  
gas exhausting system



When welding with gas  
exhausting system

## Machines On Site & Demonstration Conditions

