

## THE GOOD GUIDE TO: AUTOMATIC BUTT FUSION

# Do's and Don'ts

### PRE JOINTING CHECKS

- Use equipment that is clean, in good condition, regularly maintained and within required calibration/service.
- Ensure the correct jointing parameters for the machine and pipe are known and understood and correct parameters are selected.
- Ensure the generator is in good condition and has plenty of fuel.
- Check that the heater plate is clean - wash only when cold with clean water and dry with a lint free cloth or paper towel. Clean trimmer discs before use with lint free cloth.
- Check that the trimmer is clean and that the blades are not damaged and in the correct position for the required pipe size.
- Ensure clamp liners and securing screws are of the correct size.
- Cover pipe ends to eliminate wind chill to the heater and joint interface.
- Clean pipe surfaces inside and out (approx 300mm), clean pipe ends and clamps before inserting pipe into machine.
- Position pipes in clamps with the pipe marking to the top and aligned.
- Wash the heater plate when cold before every welding session and perform dummy welds when hot to remove fine particles and prevent the production of fumes. Carry out one dummy weld on pipe size 180mm or below, or two dummy welds on larger pipe sizes. The first print out should read 'Error 20 Abort During Fusion' if butted or 'Error 19 Abort During Soak' if prior to butting or 'Error 32 Abort During Dwell'.
- Always perform dummy welds after changing pipe size and also if the heater plate has been allowed to cool.
- Ensure that when trimming a continuous ribbon of material of pipe wall thickness is produced from both pipe ends before commencing feathering operation.

### ABF DO'S

- Always input correct operator code and job code to allow for full traceability.
- Always weld in a shelter and on a suitable board or ground sheet.
- Check size, SDR and pipe material to ensure compatibility.
- Always ensure pipes are aligned correctly and supported on pipe support rollers to minimise drag.
- Always use trimmer/hotplate stands provided.
- Always remove swarf from underneath pipe ends and chassis.
- Visually check that both ends are completely trimmed.
- Always check pipes for alignment and gaps around the entire circumference of the abutted pipes.
- Always remove external bead from completed joint, bag and label with corresponding joint number for submission and inspection by the supervisor.

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### ABF DON'TS

- Attempt to use equipment unless trained to do so.
- Attempt to weld pipes of incompatible materials or SDR.
- Leave swarf inside pipe or on chassis.
- Introduce dirt onto trimmed pipe ends whilst removing swarf.
- Touch trimmed pipe ends or fitting ends.
- Remove pipes from machine before cooling time had elapsed.
- Attempt to cut corners in any part of the welding cycle.
- Attempt to install pipe until fully cooled.
- **DO NOT UNDER ANY CIRCUMSTANCES ATTEMPT TO PULL THE MATERIAL FROM THE SKIN AS THIS WILL INVARIABLY REMOVE THE SKIN AS WELL.**
- Avoid contact with trimmer blades when cleaning and especially when in motion, blades are very sharp and could cause serious injury.
- Do not attempt to operate the trimmer whilst it is out of the machine or attempt to by-pass the safety switch.
- Keep fingers and hands away from the pipe end, chassis, trimmer and heater while in operation.
- Do not attempt to lift or move lengths of heavy pipe without assistance. The requirements of 'manual handling' should be adhered to.
- An audible alarm is fitted to automatic butt fusion machines to warn of impending movement.
- Normal precautions should be observed when handling electrical equipment and, for safety reasons, all 110v portable generator sets should be 'centre tapped' for site use +55/0/-55 volts.

### HEALTH AND SAFETY

Although we make every effort in the design of our equipment to ensure operator safety, it is worth bearing in mind the following precautions:

- Do not touch heater plate (unless to clean when cold).
- Never allow molten or semi-molten polyethylene to come into contact with skin. In the event of such an occurrence it is recommended that cold water should be used to flush the affected area and medical advice be sought.
- Health and safety regulations insist upon the wearing of personal protective equipment such as gloves, safety glasses and safety boots.

**ALWAYS REMEMBER THAT ALL JOINT RECORDS ARE AUTOMATICALLY STORED AND SHOULD BE DOWNLOADED ON A REGULAR BASIS TO ALLOW FULL TRACEABILITY AND TO PROVE THE INTEGRITY OF WORKMANSHIP**