

Smart managers reduce work effort

The fourth step to reduction of welding costs: reduce work effort, avoid welder fatigue.

By Jack R. Barckhoff

Reducing work effort on the part of the welding operator, the fourth step to management and control of welding operations, begins with a healthful work environment. This means keeping a clean and tidy shop; providing good lighting; providing good ventilation, particularly in enclosed welding booths, and cleaning air of dust and fume; furnishing workers with protective equipment and clothing where noise, heat, and dust cannot be eliminated; and maintaining equipment and tools.

Every shielded-metal-arc-welding work station should have a weld-rod stub bucket: stubs thrown on the floor are a safety hazard. Similarly, scrap and cut-off material should go into bins, located around the shop to save walking and to encourage scrap collection.

Keep equipment running

Maintenance of equipment and major tooling should include rou-

FIVE DO'S

for management and control of welding:

Reduce weldmetal volume.

Reduce arc time per weldment.

Reduce scrap and rework.

Reduce work effort and fatigue.

Reduce motion and delay time.

tine blow-out of dust that accumulates in welding equipment and check and repair of wire feeders, cable assemblies, and guns for worn insulation and loose connections. Check and lubricate moving-equipment mechanisms, including gear assemblies on positioners, turning rolls, and manipulators to maintain minimum gear backlash and for safety. Check accuracy of meters and scales on ammeters, voltmeters, and wire-feed-speed indicators. To avoid production delays, the shop should keep on hand a ready supply of tools and consumable parts, the inventory based on past use.

Smooth-running equipment avoids frustration and fatigue.

Management must also supply the welder with the equipment he needs to handle and transport parts without straining. This includes handling equipment, everything from large cranes to simple push-along dollies for parts transport; positioning equipment that allows the welder to position parts without straining to reach the joint; worker-positioning equipment, including guarded platforms, to enable him to reach joints in large assemblies; and even simple work tables to avoid the need to bend and twist to reach for parts and weld joints.

Tooling and adapters should be readily available to quickly mount parts on positioners. Welding above the head or below the knees calls for

mounting the work on elevating tables or putting the welder on an elevated work platform to keep the welds between his knees and head. This becomes more important as production rate increases.

Comfort counts

Finally, train the welding operator to maintain a comfortable and efficient working position to enable him to weld more efficiently with less effort.

Welders should not have to grip welding gun, electrode holder, or cutting torch very tightly. The best practice is to hold torch, gun, or holder at the balance point. Welders should learn to steady themselves by leaning against the work or equipment where practical, getting into a position that is comfortable and that provides the best visibility of the joint. Body position should be comfortable and steady enough to permit the worker to weld non-stop for the intended distance. ■



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