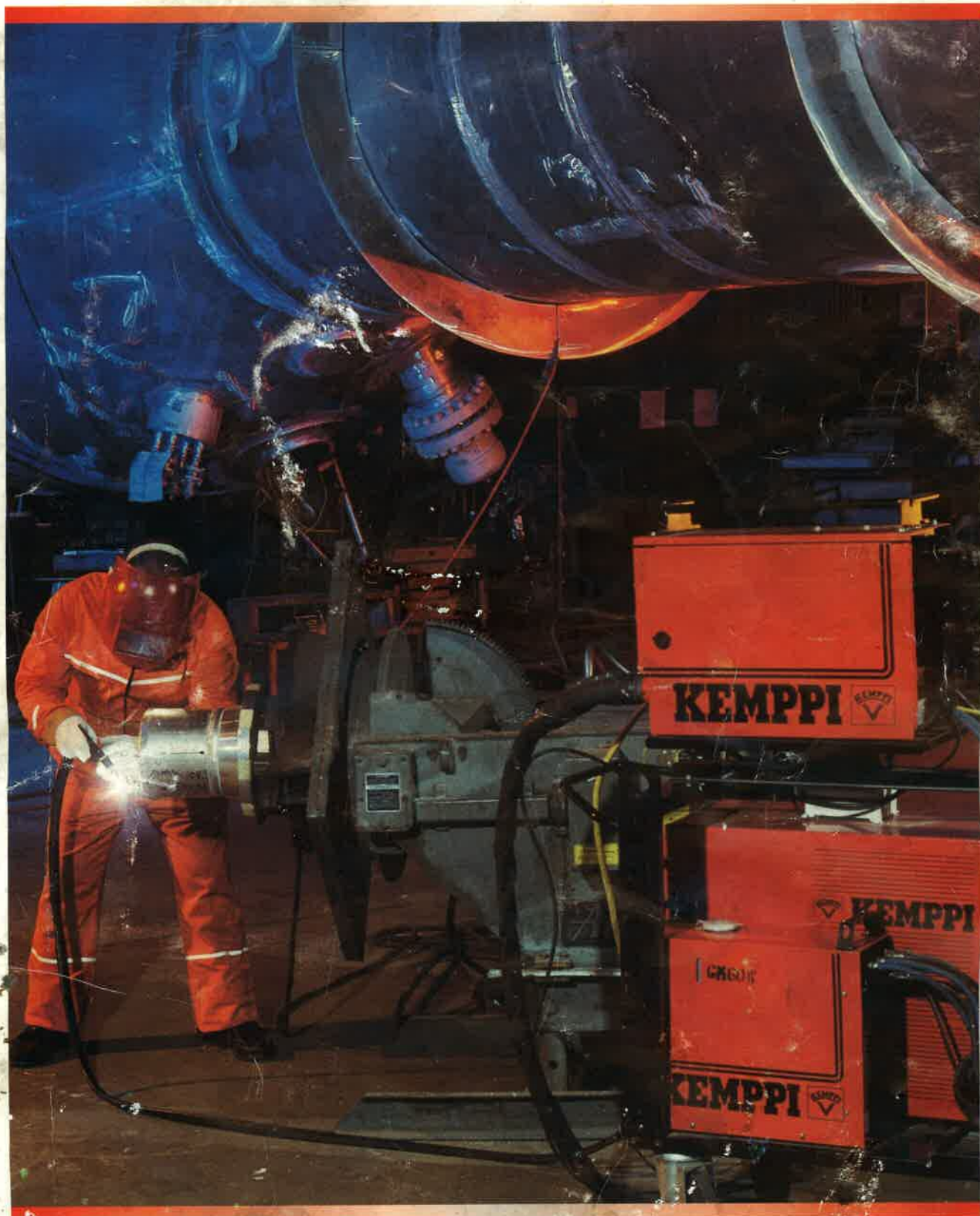


KEMPPI MULTISYSTEM



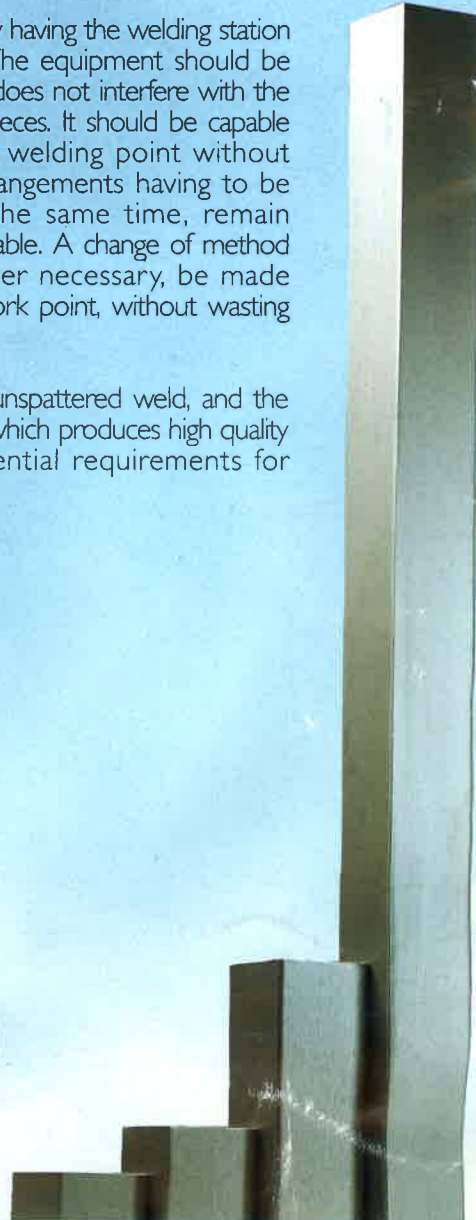
What is the cost of welding?

The cost is broken down into labour, filler material, shielding gases, energy and equipment. Since labour accounts for by far the greater part of the total – approximately 75% – it is this area where an effort must be made to economise.

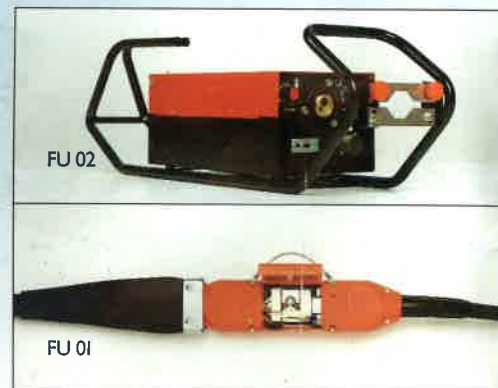
In manual welding the amount of preparation time spent by the welder on handling, grinding, setting conditions and other operations depends very much on the equipment at his disposal. Full use of the welder's skill can only be made while the arc is actually burning. Also, unnecessary work stages can be eliminated with the right choice of welding

equipment and by having the welding station well organised. The equipment should be located where it does not interfere with the handling of the pieces. It should be capable of reaching the welding point without complicated arrangements having to be made and, at the same time, remain completely adjustable. A change of method should, whenever necessary, be made directly at the work point, without wasting time.

A neat, flawless, unspattered weld, and the welding method which produces high quality results, are essential requirements for efficiency.



EQUIPMENT	ENERGY + GAS	FILLER MATERIAL	LABOUR
3%	6%	16%	75%



MULTISYSTEM

The key to productive welding

The Multisystem, a welding system consisting of modules offers the most productive configuration for all welding jobs.

- Assemble the right equipment to meet particular needs from the modules of the Multisystem.
- Select the most productive welding method: in DC current manual metal arc, TIG, MIG, pulse MIG and in AC current manual metal arc and TIG.
- Excellent welding characteristics with any method.
- Complete remote control without interrupting the welding.



- The method can be changed easily to pre-selected welding parameters.
- The Multisystem consists of modules, so maintenance can be carried out in the minimum of time.
- The light weight MIG and TIG units can be sited far from the power source. In MIG/MAG welding the FU sub feeder can be connected to the FU wire feeders so that welding up to 20 m is possible.



THE KEMPPI INVERTER – THE



Multisystem DC current power sources PS 2800, PS 3500 and PS 5000

With the PS power source, professional welding requirements are met by taking advantage of advanced electronics. It is the smallest and lightest in its power class. It does not waste energy, directing all its power to the arc. The PS power sources available cover all the most important welding power classes:

PS 2800 280 A

PS 3500 350 A

PS 5000 500 A

With a Multisystem remote control unit the welding parameters for the power source can be set manually at the work place without interrupting the welding. Compared with conventional power sources, the speed of adjustment of the PS power source is up to 100 times faster. The high adjustment speed allows improved control of the welding process which means in effect that the welding properties are superior.

Conventional power sources do not adjust themselves as well to fluctuations in the mains voltage as do the PS power sources. Its low power requirements makes it possible to connect to almost any power supply with the PS (PS 2800/16 A fuse). The Multisystem welding system can be connected direct to mechanised welding equipment.

The power sources are protected against overloading. A thermostatically controlled fan and filter help to protect them from dust. The fan effectively takes care of the cooling in the case of arduous welding. Operating safety is guaranteed by an excess voltage trip. The ignition pulse makes sure that the arc ignites every time. The arc burns steadily, maintaining the preset parameters despite fluctuations in the mains voltage. Round the power source you can build up an effective configuration which can be extended later on.



HEART OF THE MULTISYSTEM



Multisystem AC/DC current power sources PSS 3500 and 5000; simple change over from one method to another in two power classes

With PSS power sources you can weld by all welding methods which would normally require four high quality conventional power sources. The PSS power sources have excellent welding characteristics when using direct current (DC) in MMA, TIG and MIG welding as well as with alternating current (AC) in MMA and TIG welding. With the PSS 5000, pulse-MIG welding can also be carried out when used in conjunction with the C 120P pulse unit.

Productivity and quality

Productivity is increased when welding if the disposition of material per ampere/minute is high. MIG/MAG and pulse-MIG methods can increase productivity particularly if replacing MMA and TIG. The PSS power sources ensure a fast change over from one welding method to another; so that a balance between quality and productivity can be optimised.

Unbeatable practical technology

The automatic current type selector of the PSS power sources makes welding faster and easier. The power sources give the required current type automatically when the operating switch of the welding torch is pressed. Changing from one method to another is simply by changing the torch. In MIG/MAG welding two wire feed units can be connected to the PSS. Different current types can be selected for the individual wire feed units.

Welding becomes faster; when for example, there are different welding operations at the same workplace and the correct material and current type can easily and quickly be selected.



THE MULTISYSTEM PROVIDES

LINCOLN
400 AMP
DC STICK
£350

CHOOSE
PULSED
MIG
£250



MIG/MAG WELDING

The modern electronics of the Multisystem MIG/MAG equipment guarantee perfect ignition and a steady arc. They also keep spatter down to a minimum with all weldable materials. The provision of complete remote control of voltage and wire feed rate throughout the entire power range, makes it possible to set the most appropriate welding parameters for any particular welding point quickly and accurately. FU wire feed units are reliable, versatile and easy to use. The voltage and wire feed rate can be set either on the power source or by remote control. The stepless control of burn-back time is standard in FU units. The feed wheel snap-connection clamp and the spool hub snap coupling reduce down-time when changing the wire pool. The excellent wire feed properties are the result of properly dimensioned, large-diameter feed wheels which allow a balanced drive to the wire. When the sub feed units are connected to the FU wire feed unit, the properties of the standard equipment are enhanced by making it possible to weld at a distance of as much as 20 metres from the wire feed unit. Accurate and versatile remote control units make the welder's work easier, and improve productivity.

You can choose between a normal and preprogrammable remote control unit. Alternatively you can choose a MT welding gun with remote control unit from the complete range of welding guns. With different kinds of auxiliary function units and metering devices, you can get more benefit from your machine.

TIG-WELDING

Multisystem is also productive in TIG-welding. When TIG welding is the most suitable method required, the Multisystem offers a choice of reliable, fully-electronic TU high frequency units. Automatic interruption, pulse current and slope functions make the welder's work easier. The ability to control the process remotely, without having to interrupt the arc, ensures efficient welding with increased reliability. Welding may sometimes disrupt communication frequency signals and ADP equipment. The TU high frequency unit minimises interference. The 30V safety voltage of the Multisystem TIG machine allows it also to be used in cramped, humid and enclosed places.



VERSATILE OPPORTUNITIES



MMA WELDING

The PS power sources by themselves are suitable for productive MMA welding. The ignition pulse ensures that the arc ignites every time. The arc burns steadily, maintaining the preset parameters unchanged despite fluctuations in the mains voltage. On a welding site or factory installation, it is often necessary to change the welding station. The PS power sources are easy to move from one place to another on their special trolleys, even under most difficult conditions. Because of their low power requirements - supply problems are minimal. With a wide range of remote control units and auxiliary function units the capabilities of the power sources can be extended.



ALL IN ONE – all the welding methods in the one package

A complete unit can be made-up from the Multisystem modules to give you the three most common welding methods with AC or DC current in the same package. In addition pulse-MIG welding and carbon arc gouging are possible, too. The Multisystem power sources, wire feed, high frequency and water circulation units – together with remote control units and trolleys – represent the most up-to-date technology in welding. Many different auxiliary function units simplify the work of the welder and increase productivity of his work. In circumstances where the work place demands a continuous change of welding method, the Multisystem is a really worthwhile investment.

Welding Aluminium by TIG

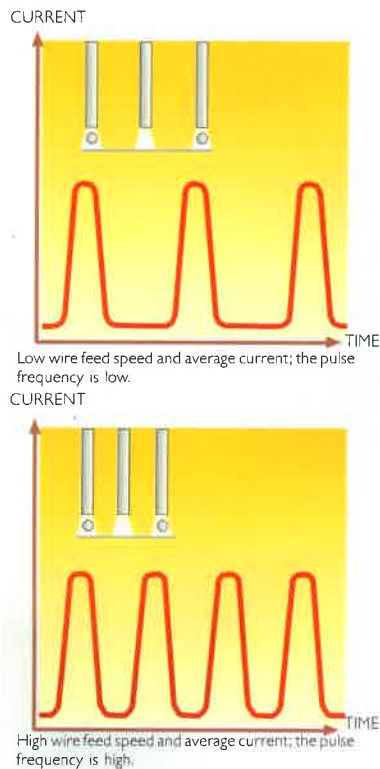
The square wave of the PSS welding current guarantees excellent welding characteristics throughout the entire current range. The automatic change in the welding current frequency (50 Hz–100 Hz) when reducing the welding current, gives excellent cleaning and a stable arc. In complicated welding operations the optimum penetration, form and cleaning of the welding seam is achieved by the welding current balance control as shown below.

The PSS power sources have ignition automation which means that the arc ignites without fail. It always ignites the AC-TIG on DC and automatically changes over to AC when the arc has been ignited. The PSS meets all the safety norms applicable to AC welding.



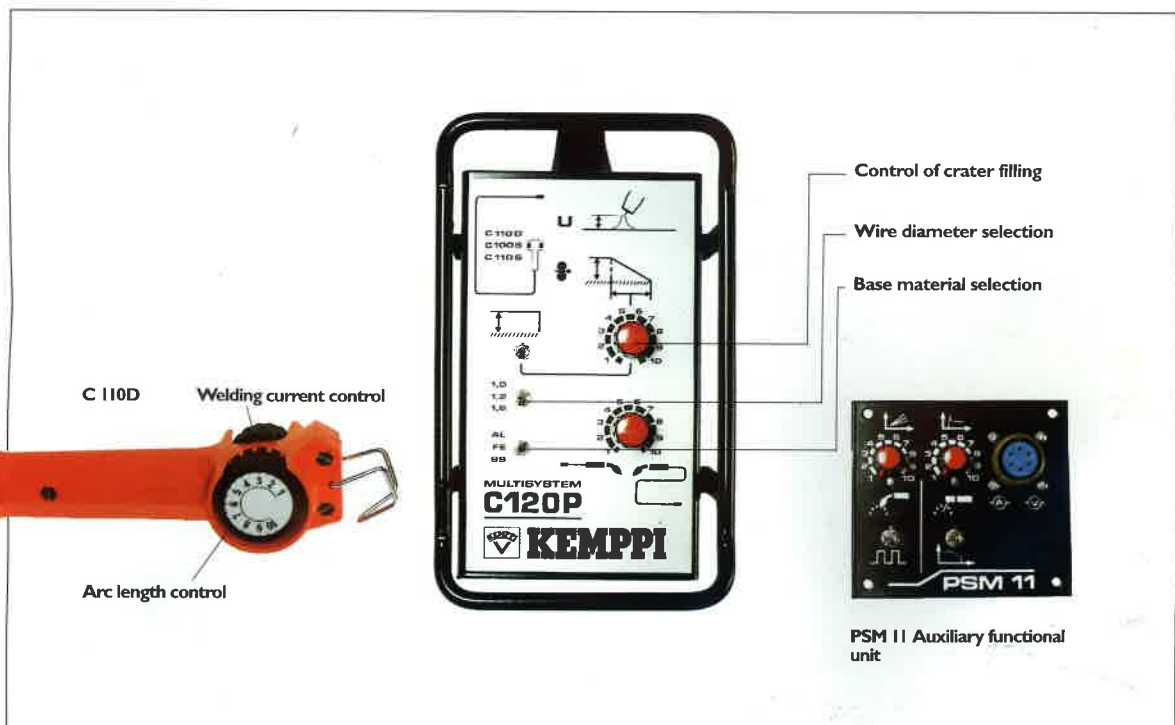
MULTISYSTEM IN PULSE-MIG WELDING

In many cases conventional MMA and TIG welding can be replaced by the faster and more productive pulse-MIG method. The Multisystem PS 5000 MIG system becomes a pulse-MIG machine simply by connecting to it the C 120P pulse unit and the PSM 11 auxiliary function unit. The C 120P pulse unit has pre-programmed pulse parameters for wire of three different wire diameters and for three different materials. The pre-programmed pulse control makes it necessary to set only the welding current and the length of the arc while welding. These parameters are easily set with the C 110D remote control unit at the place of welding. The Multisystem PS 5000 pulse-MIG guarantees high quality and productivity even when welding difficult materials. At its best it



can weld aluminium and stainless steel as much as 20% more productively than is possible with normal MIG-welding. Each wire dimension has a wide welding current range, and it can weld base materials of different thicknesses in all welding positions. Pulse-MIG makes it easy to get a clean and flawless weld as well as the optimum weld shape. The welding has no spatter and thus ensures an excellent appearance that does not require cleaning. The equipment can also be connected easily for robotic and automated use.

Synergic pulse-MIG and two different wire feed parameters.



MECHANISED AND ROBOTIC WELDING

The Multisystem is suitable for mechanised and robotic welding without modification. All the power sources can be steplessly controlled remotely throughout the entire setting range. The arc ignites reliably every time. Multisystem equipment is compact and easy to fit on to the automated/robot installation. The welding parameters can be set by the robot programming equipment. The Multisystem is then able to feed back the welding data to the control equipment of the robot. Multisystem equipment meets the highest demands of properties and reliability for automated robotic welding. When the FA I auxiliary function unit is attached to the wire feed unit it can be interfaced with the robot control equipment. The settings and feed back data of the welding parameters go through this unit. The parameters can be adjusted continuously; the robot can be pre-programmed with various auxiliary functions, such as crater fill and creep start.

