



RFQ NUMBER : Erac_FDT_6328

**PROVISION OF: RADIOGRAPHIC TESTING OF EXOTHERMIC WELDS AT ERMELO DEPOT
FOR A PERIOD OF: 2 Years (24) MONTHS.**

HOT WORK PERMIT*

DATE :

PERMISSION IS GRANTED TO.....

TO USE.....IN THE.....(Exact Location)

BETWEEN.....a.m. AND.....a.m.

.....p.m.p.m.

The above location has been examined.

There are no combustible liquids, vapours,
gases or dusts.

All combustible material has either been
removed or suitably protected against
heat and sparks.

Signature of person issuing permit and position held:

.....
.....

A man will be standing by with an extinguisher/hose reel
while the operation is in progress.

He and the operatives have had the nearest fire
alarm/telephone pointed out to them and have
been told what to do in the event of a fire.

Work area and all adjacent areas to which sparks and heat might have spread were thoroughly
inspected on completion of the operation, and thirty minutes later no smouldering fires were
discovered.

Signature of person responsible for the work:

.....
(After signing return to the person who issued it.).

*Applicable to all operations involving flame, hot air or arc welding and cutting

equipment, brazing and soldering equipment, blowlamps, bitumen boilers and other equipment producing heat, sparks, naked flames, etc.

HOT WORK PROCEDURES (In-House and Contractors)

1. Introduction

Many processes and activities normally occurring in industry produce heat or flame as a natural part of the operation. examples of this are:

Cutting	Welding	Grinding
Brazing	Soldering	Drying
Burning		

When these operations are conducted in a controlled environment (e.g. welding in a mechanical workshop) or the process is designed to separate the heat or flame from extraneous combustibles there is seldom any danger of unwanted ignition. But when the operation has to be carried out under other circumstances – for example emergency breakdowns – a fire may be started. This danger is especially severe when outside contractors work on the premises.

2. Normal Precautions

Arrangements must be made at the planning stage to ensure that normally present ignition sources cannot come close enough to combustible materials to cause ignition.

- 2.1 Separate production areas from storage areas by means of firewalls, where practicable. If impracticable separate by distance together with clear demarcation and/or screens to control sparks.
- 2.2 Each plant must set aside a “Restricted Area” for routine welding and flame cutting (e.g. workshop bricked off from production, storage areas, etc.).
- 2.3 Ensure that flash back arrestors are fitted to all cutting apparatus.

3. Abnormal Circumstances

The following special precautions must be taken when heat or flame producing activities are unavoidably carried out outside the restricted area or in a combustible environment, as when welding repairs must be undertaken on a large piece of machinery which cannot be taken to the workshop, or heat shields removed from a machine, which cannot be stopped.

- 3.1 No such work to be carried out, whether by own staff or contractors without the issuing of a daily clearance “hot work permit” –signed by the manager responsible for risk control or deputy nominated by him.
- 3.2 It is the responsibility of the manager responsible for Risk Control or his nominated deputy to ensure that conditions are safe for such work and that all precautions laid down in this standard are being observed. When possible the fire services should give the assurance that no fire hazards exists and countersign the hot work permit accordingly.

- 3.3 The Hot Work Permit shall be prominently displayed at the place of work and returned to the authorising person after completion.
- 3.4 Remove combustibles and flammable materials from the area as far as practicable. Check above below and around the work place.
- 3.5 Place portable screens between the combustibles and ignition source, with consideration being given to flying sparks and molten metal.
- 3.6 Provide additional fire extinguishers of the appropriate type at the work place.
- 3.7 Operators in the area must be practised in the use of extinguishers, and be familiar with the alarm procedure.
- 3.8 In particularly hazardous areas, e.g. near flammables, a member of the fire team must be on standby during the operation.
- 3.9 Only qualified operators should use welding and cutting equipment.
- 3.10 Avoid undue strain and weakening of cylinder walls due to mechanical damage.
- 3.11 Avoid gas coming into contact with re-active materials (e.g. do not use copper piping with acetylene).
- 3.12 Avoid gas leaks from valves due to defects or being incorrectly turned off.
- 3.13 Avoid faulty attachments to gas cylinders (e.g. defective rubber tubing, torches, etc.)
- 3.14 Do not allow oil or grease to come into contact with oxygen.
- 3.15 Keep cylinders and valves free from dirt and grit.
- 3.16 Check the equipment being used for the operation (e.g. welding sets) for safety before the work commences.
- 3.17 Check the work place thoroughly for incipient fires after completion of the work or working periods, and re-check 30 minutes thereafter.
- 3.18 Portable welding and cutting sets should be chained and locked in the workshop when not in use. Key to be held by workshop foreman.

4. Permit System

A draft copy of a Hot Work Permit is shown.

5. Contractors

- 5.1 When contractors or servicemen are employed to carry out welding and/or cutting operations The contractor must obtain a "Contract Agreement" from the plant engineer.
- 5.2 Before issuing a "Contract Agreement" the responsible person must satisfy himself that:
- (a) the job can be carried out safely
 - (b) all additional fire precautions have been pre-arranged
 - (c) the contractor will appoint a competent person in terms of the Act 6 of 1983 and regulations
 - (d) no reasonably safe alternative method of carrying out the work is available (e.g. dismantling and removal to workshop).
- 5.3 No contractor may begin work of any type in any operation without his written affirmation that he understands the restrictions on welding and flame cutting.

“PREVIEW COPY ONLY”

- 5.4 The contractor and his employees must be made aware of:
- (a) all potential fire hazards in the area where operations are to be carried out (e.g. combustible