

(17)



**PLANT PURCHASING SPECIFICATION
 HEEP - HARDWAR**

AUTO DARKENING WELDING HELMET

SIGN. & DATE

SUPERSEDES INVENTORY NO.

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1.0 Scope

This standard covers the requirement of Auto Darkening Welding Helmet designed for most of the welding applications, specifically for MIG and TIG welding.

2.0 Compliance with Standards

It shall comply with EN 166, EN 175, EN 379, and EN 12941

3.0 Technical Requirement

Auto Darkening Welding Helmet unit should consist of Headpiece (Helmet), auto darkening Welding Filter(Lens), Breathing tube, Turbo unit, battery, airflow indicator, Filter etc. All the components of the unit shall be approved in conjunction for use.

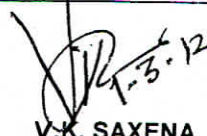
3.0.1 SPECIFICATIONS FOR HEADPIECE (HELMET)

1. The headpiece should be of modular construction based on durable cradle.
2. The headpiece should be made up of Plastics/ Polyamide/ Polycarbonate and its outer protection plate should be made up of scratch resistant polycarbonate and can be replaced easily if required
3. The outer protection plate should be approved to EN 166-1-BT and the inner protection plate should be approved to EN 166-1-S.
4. The headpiece should have a combined unit for protection of face and powered air purifying respiratory systems.
5. The Auto-Darkening Welding Filter helmet should be provided with provision for including respiratory systems.
6. The Auto darkening welding helmet should have five selectable dark shades 9, 10, 11, 12 and 13 and four user selectable levels of sensitivity ensure reliable arc detection.
7. The auto darkening welding filter lens should have Excellent visibility in light state, shade 3, for easy welding preparation and after-treatment
8. The viewing area of the welding filter should not be less than 55 X 107 mm and weight of the headpiece including the welding filter should not be more than 550 gms.
9. The switching time between the light-dark shades should not be less than 0.1ms.
10. The switching time between the dark-light shades should be adjustable between 60 – 500 ms.
11. The operating system should have one touch soft button and unit should have auto switch-off facility which switches off the system if system is not operational for more than 60 minutes.
12. The auto-darkening filter lens unit should have dual Power Supply of 3V Replaceable Battery (which should have min. 3000 hours life)
13. The auto-darkening filter lens should also have Solar cell panel apart from battery power.
14. The unit should ensure reliable arc detection and having excellent visibility in light state, shade 3, for easy welding preparation and after-treatment.
15. The welding shield should be approved to EN 175.
16. The auto darkening welding Filter should be approved to EN 379.

SIGN & DATE

	NAME	DESIGNATION	SIGNATURE	DATE
WORKED	ABHAI SINGH	SAFETY OFFICER / DY. MGR	<i>Abhai Singh</i>	01/03/2012
CHECKED	JAGAT NARAIN	SAFETY OFFICER/ SR. MGR	<i>Jagat Narain</i>	01/03/12

INVENTORY NO.

		APPROVED BY	
		 V.K. SAXENA DGM (HSE)	
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3.0.2 SPECIFICATIONS FOR POWERED AIR PURIFYING RESPIRATOR

1. The Power Air Purifying Respirator unit must be a leather belted waist mounted; battery operated system which should provide a continuous supply of filtered air to a headpiece as a part of a respiratory system.
2. The unit must be of Sleek design resulting in improved access to tight spaces and smooth contoured surface is less prone to snagging and getting caught in small tight corners. The unit should have a spatter proof leather belt.
3. The unit should have spark arrestor which should safeguard the main particulate filter from burning if spatters fall on the unit.
4. The unit should have a Continuous filter life indicator.
5. The Power Air Purifying Respirator unit should incorporate an electronic control unit (ECU) that ensures that the blower unit supplies a constant flow of air 170 liters/minute at normal speed and should have a provision to increase the speed to 200 lpm if required. An airflow indicator should be provided along with the system to ensure the required flow rate is maintained.
6. The Powered air purifying system should have audio and visual alarms which alerts the user of low battery or motor malfunctioning.
7. The Power Air Purifying Respirator should be powered by a rechargeable battery pack fitted to the unit.
8. Battery Pack should be a NiMH type and be available in 8 hours and 14hrs options

4.0 Authorization Certificate:

Vendor should be authorized distributor / dealer and Authorization Certificate should be provided from the Manufacturer specifying the BHEL tender/enquiry number.

5.0 Test certificate:

The supplier shall furnish two sets of ink signed, original test certificates of the equipment as per requirements of relevant Indian standard/EN /CE. One set of test certificates will be required along with dispatch documents and the other along with supply of the equipment.

6.0 Guarantee:

The supplier shall furnish guarantee against any design /manufacturing defect and performance guarantee of the auto darkening welding helmet as per quoted performance parameters for a period of 12 months from the date of acceptance of the equipment at our end.

7.0 Document and Literature:

Four copies of descriptive leaflets, technical literature, operation and maintenance manual are to be supplied along with each equipment.

8.0 Packing and Dispatch: The equipment / accessories shall be suitably packed.

9.0 Installation & Training:

The supplier shall commission/install the equipment at our site and provide necessary training/demonstration on correct way of using and maintaining the equipment, to our staff at our site, free of cost.

SIGN &
DATE

	NAME	DESIGNATION	SIGNATURE	DATE
WORKED	ABHAI SINGH	SAFETY OFFICER / DY. MGR	<i>Abhai Singh</i>	21/03/2012
CHECKED	JAGAT NARAIN	SAFETY OFFICER/ SR. MGR	<i>J. Narain</i>	01/03/12
		APPROVED BY	<i>V.K. Saxena</i>	13.12
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