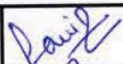
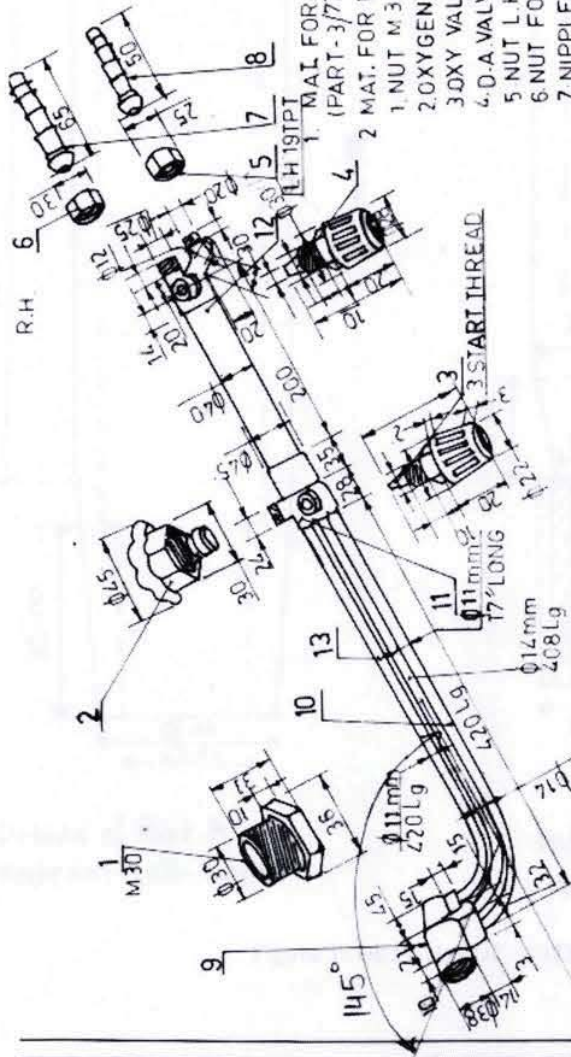
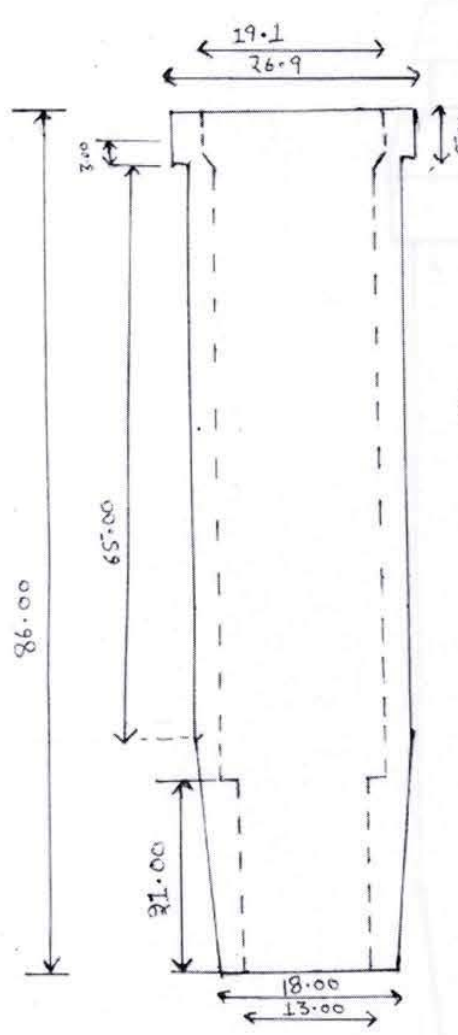
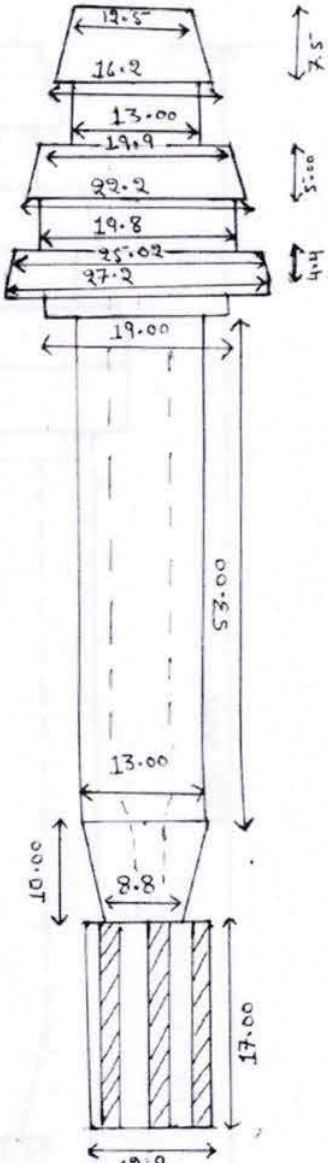


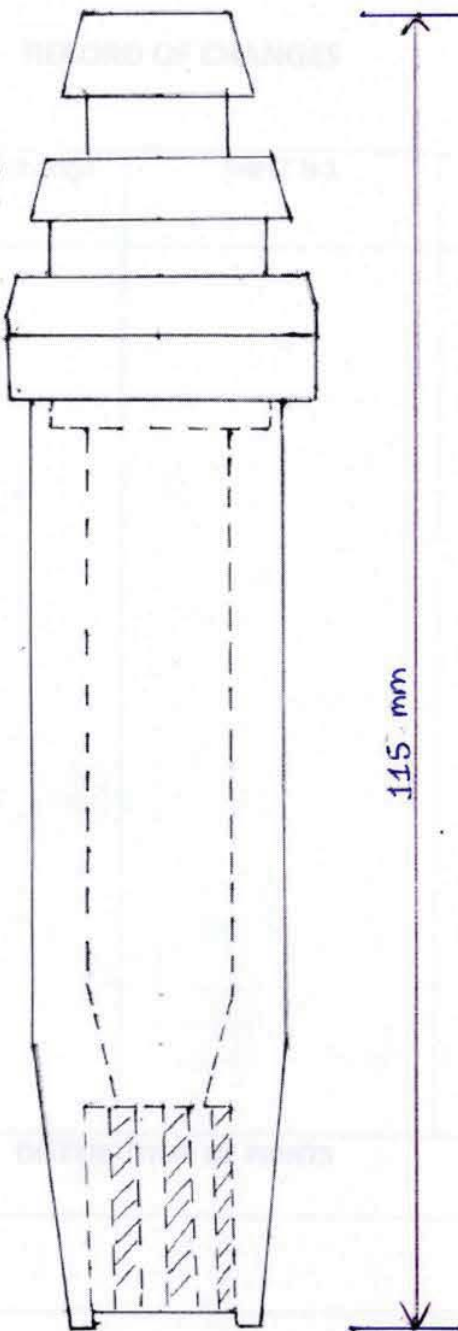
दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी. - हरिद्वार)		FF06053 Rev00	
		PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)		पृष्ठ का Page 1 of 7	
सामग्री सूची संख्या INVENTORY NO	सुपरसेड INVENTORY NO	RLNG CUTTING TORCH AND NOZZLE			
1. General					
This specification governs the requirements of High Pressure Type Gas Cutting torch and corresponding nozzles for use with Re-liquefied Natural Gas (RLNG). The torch and nozzle shall be procured from same source when both the items are indented together. When nozzles are procured separately, vendor is to submit sample of the nozzle the fitment and use of which will be ascertained in the shop floor before technical acceptance of offer.					
2. Application					
The cutting torch alongwith fitting nozzle shall be used for cutting of risers, runners and any extra material like padding in steel castings with or without use of iron powder. The riser sizes are upto maximum of 1000 mm. The material to be cut can be plain C, 1.5% Mn steel, Cr-Mo-V steels, Stainless steel, 9Cr1Mo steels, etc. The natural gas and oxygen available in foundry is through gas pipeline.					
3. Compliance with national standard					
This specification is generally based on IS:7653					
4. Details					
4.1 A sketch for Blow pipe and nozzle for gas cutting is enclosed where material and approximate sizes are mentioned. However, this sketch is only a guideline for the supplier. Supplier may offer its own gas cutting torch and nozzles subject to its approval by CFFP after shop trials.					
4.2 Material: The tubes of the torch should conform to IS1545. The knobs and handle should be also be made of brass for longer life and better grip. The material used for the blowpipes shall have adequate resistance to chemical and thermal attacks of the gases used and the environmental conditions (dust and fumes) of a foundry. The external surface shall be resistant to sparks and to other external influences. The outer casing of Nozzle should be of Tellurium-Copper Alloy and inner component should be of brass alloy.					
स्वतंत्राधिकार एवं गोपनीयता इस प्रलेख में दी गई सूचना भारत हेतु इलेक्ट्रिकल्स की सम्पत्ति है। इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	हस्ताक्षर एवं दिनांक SF Rajesh Kumar LF M Javed CHAIRMAN CPSC VK AGARWAL	अनुवादक TRANSLATED BY निर्माणकर्ता WORKED BY L AGRAWAL जांचकर्ता CHECKED BY R LAKRA	स्वीकृति APPROVED BY TUSHAR DAVE	दिनांक : 18.2.16	
सामग्री सूची संख्या INVENTORY NO	सहमत विभाग AGREED DEPTT	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	संस्थान मानक समिति APPROVED : PLANT STANDARDS COMMITTEE	
			निर्माण : PREPARED : FOUNDRY TECH	जारी : फाउण्ट्री टेक्नालॉजी ISSUED : FOUNDRY TECHNOLOGY	दिनांक : DATE : 18.2.16

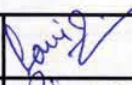
दिनांक एवं हस्ताक्षर SIGN & DATE			संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)		FF06053 Rev 00 पृष्ठ का Page 2 of 7	
सामग्री सूची संख्या को अधिष्ठाता करता	SUPERSEDES INVENTORY NO	4.3 There should be no leakage from valves, seats for nipples and cutting nozzles while the blow-pipe is in use. 4.4 The blowpipe should be equipped with flash-back arrestor system made of same material as that of torch. The location and weight of the flash-back arrestor should be such that it should not hinder the holding of the torch and the cutting process 4.5 The oxygen and natural gas connection with main pipeline shall done using 10 mm rubber hoses. 4.6 The input pressure of the gas shall be 10 kg/sqcm for oxygen and 4.4 kg/sqcm for natural gas. 4.7 The equipment should be amenable for continuous working for 4-5 hours.				
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited It must not be used directly or indirectly in any way detrimental to the interest of the company		5. Acceptance Tests 5.1 For established supplier, who has supplied RLNG Torch for gas cutting for continuously 2 years giving troublefree service, the item can be accepted on the basis of TC & GC given by supplier. 5.2 For new suppliers, a sample of cutting torch alongwith nozzle will have to be submitted for carrying out trials in CFFP. The trial shall be done on actual casting where the risers (minimum width/diameter 500 mm) shall be cut using the torch. Following parameters shall be the basis in shop trial: 5.2.1 Flame and its adjustment 5.2.2 Cutting performance 5.2.3 Nozzle setting with head 5.2.4 Leakages 5.2.5 Flashback.				
स्वत्वधिकार एवं गोपनीयता इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए ।						
दिनांक एवं हस्ताक्षर SIGN & DATE						
सामग्री सूची संख्या				निर्माणकर्ता WORKED BY L AGRAWAL		
				जांचकर्ता CHECKED BY R LAKRA		

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)	FF06053 Rev 00	
			पृष्ठ Page	का of
सामग्री सूची संख्या को अधिकृतित करता	SUPERSEDES INVENTORY NO	6. Inspection, Deviation and Replacement 6.1 BHEL reserves the right to inspect material at site before despatch. The supplier shall intimate in advance enclosing a copy of test certificate of the material offered for inspection. However, inspection at BHEL shall be final. The supplier shall offer BHEL representative all reasonable test facilities without charge to satisfy the latter that the material is being furnished in accordance with this specification. The supplier shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities are not available at his works, the supplier shall make necessary arrangements for carrying out the prescribed test elsewhere. 6.2 If the material received is not found in accordance with the requirements, it shall be rejected and the supplier will have to replace it free of cost at the earliest. 6.3 For any deviation from the specification demanded by the supplier prior approval of BHEL must be obtained in writing.		
7. Test Certificates 7.1 Unless otherwise specified, one original and three copies of original manufacturer's test certificates shall be supplied with each consignment bearing the following information. In order to facilitate quick clearance of material, the supplier shall ensure to send a copy of test certificate along with despatch document. a. BHEL PO No. with Date b. Specification No. c. Supplier reference d. Identification No. / Batch No. e. Properties as per Clause 4 f. Any other specific information which the supplier would like to convey. 7.2 Suppliers other than the original manufacturer shall ensure providing original manufacturer's test certificates with linkage to supplier's invoice stating the batch No., lot No, etc. of the supply.				
8. Packing and Marking Packing shall be done in such a way that there is no damage/loss of the item in transit and storage. Packing shall be that of the original manufacturer. Each consignment should bear the following information (a) BHEL PO reference. (b) Supplier's trademark, if any (c) Supplier's TC and GC (d) 3 copies of operating manual and catalogue to be provided alongwith supply. (e) List of spares to be provided alongwith supply.				
स्वतयाधिकार एवं गोपनीयता इस प्रवेश में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है. इसका प्रयोग एवं अप्रयोग रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited It must not be used directly or indirectly in any way detrimental to the interest of the company	निर्माणकर्ता WORKED BY	L AGRAWAL	
दिनांक SIGN & DATE	सामग्री सूची संख्या	जांचकर्ता CHECKED BY	R LAKRA	

सामग्री सूची संख्या	हस्ताक्षर एवं दिनांक SIGN & DATE	स्वताधिकार एवं गोपनीयता इस प्रलेख में दी गई सूचना भारत स्त्री इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited It must not be used directly or indirectly in any way detrimental to the interest of the company	सामग्री सूची संख्या को अधिकृत करता	दिनांक एवं हस्ताक्षर SIGN & DATE
				SUPERSEDES INVENTORY NO	 संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)
निर्माणकर्ता WORKED BY L AGRAWAL जांचकर्ता CHECKED BY R LAKRA				1. MAT FOR BRASS TUBES-AS PER SP. BS 2871 (PART-3/72 CZ-11) IS:1545/82 2. MAT. FOR NOZZLE HEAD ALLUMINUM BRONZE 1. NUT M30 FOR NOZZLE TIGHTENING 2. OXYGEN HEATING VALVE 3. OXY VALVE (3 START THREAD) 4. O.A VALVE 5. NUT L.H. 19 TPT 6. NUT FOR OXY NIPPLE (R.H.) 7. NIPPLE FOR OXYGEN 8. NIPPLE FOR O.A. 9. HEAD 15° TAPPER SUITABLE FOR NOZZ LE. 10. BRASS TUBE APPROX 17" LONG Ø 11 mm 11. PIECE INTERMEDIATE ARE 12. PIECE ARRIEVE 13. OXY TUBE Ø 14 mm Bend between main pipe & extension piece to be 145° as shown.	FF06053 Rev 00 पृष्ठ का Page 4 of 7

सामग्री सूची संख्या	हस्ताक्षर एवं दिनांक SIGN & DATE	स्वत्वाधिकार एवं गोपनीयता इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited It must not be used directly or indirectly in any way detrimental to the interest of the company.	सामग्री सूची संख्या को अधिकृतित करता	द्वितीयक एवं हस्ताक्षर SIGN & DATE						
निर्माणकर्ता WORKED BY जांचकर्ता CHECKED BY			निर्माणकर्ता L AGRAWAL जांचकर्ता R LAKRA	संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)	FF06053 Rev 00 पृष्ठ का Page 5 of 7						
Details of Part A Material- Bell-Copper 						Details of Part B Material- Brass Alloy  ALL Dimension are in mm					
Figure 1: DETAILS OF NOZZLE											

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)		FF06053 Rev 00 पृष्ठ का Page 6 of 7	
समीची सूची संख्या को अधिकतम करना	SUPERSIDES INVENTORY NO	 115 mm Assembly of Part A & B Figure 2: NOZZLE ASSEMBLY			
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited It must not be used directly or indirectly in any way detrimental to the interest of the company	स्वतंत्रताधिकार एवं गोपनीयता इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए ।				
दिनांक एवं हस्ताक्षर SIGN & DATE	निर्माणकर्ता WORKED BY	जांचकर्ता CHECKED BY	L AGRAWAL R LAKRA	 	

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार)		FF06053 Rev 00			
		PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)		पृष्ठ का Page 7 of 7			
सामग्री सूची संख्या	SUPERSEDES INVENTORY NO.	RECORD OF CHANGES					
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.		REV CODE	NO. OF CHANGES	Nature of change	SHEET NO.	SIGN	DATE
स्वत्वधिकार एवं गोपनीयता इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है, सुरक्षा प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में अधिकारक को न किया गया।							
DISTRIBUTION OF PRINTS							
दिनांक एवं हस्ताक्षर SIGN & DATE		RMI					
		STANDARD SECTION					
		MPIC					
					निर्माणकर्ता WORKED BY	L AGRAWAL	
					जांचकर्ता CHECKED BY	R LAKRA	