

No. QCM/036/CV Norm/Sub-assembly
Dated -21.02.2022

“Complete Sub-Assembly of Outer & Inner Jacket of Coat ECC Imp. Ver. (with all input material) and Fabrication of Wind Cheater” as per Coat ECC Imp. Ver. Specification No.S/3558/A/TC-15/Coat ECC with amendment No. 1 to 6 and as per Annexure-‘A’ Scope of Work”

SL. NO	ITEM	END USE	MANUFACTURING PLANT & MACHINERY		TEST EQUIPMENTS		REMARKS	
			ESSENTIAL	DESIRABLE	ESSENTIAL	DESIRABLE		
01.	“Complete Sub-Assembly of Outer & Inner Jacket of Coat ECC Imp. Ver. (with all input material) and Fabrication of Wind Cheater”		<ol style="list-style-type: none"> 1. Fabric Cutting Table & Fabric Lay Cutting Machine and Single Needle Lock Stitch Sewing Machine 2. Arrangement for Plastic Snap Fastener Button Fixation 3. Over-locking Machine 4. Arrangement for Eyelet Fixation 5. The firm must possess all the essential manufacturing & testing facilities {as per the attached 05 (five) CV Norms} for manufacturing all basic input materials (i.e. 1. Outer Shell Fabric Outer Jacket, 2. Inner Filling Insulation Material (Outer Jacket), 3. Inner Lining Knitted Fabric (Outer Jacket), 4. Outer And Inner Shell Fabric (Inner Jacket) and 5. Set of Inner Filling Insulation Material ‘A’ & ‘B’ (Inner Jacket) Thermo Plastic Polymer) of Coat ECC Imp. Ver. 		Measuring Tape			
			<p>The firm must have notarized legal tie up with the firm(s) who must possess all the</p>					

			<p>essential manufacturing & testing facilities {as per the attached 05 (five) CV Norms} for manufacturing all basic input materials (i.e. 1. Outer Shell Fabric Outer Jacket, 2. Inner Filling Insulation Material (Outer Jacket), 3. Inner Lining Knitted Fabric (Outer Jacket), 4. Outer And Inner Shell Fabric (Inner Jacket) and 5. Set of Inner Filling Insulation Material 'A' & 'B' (Inner Jacket) Thermo Plastic Polymer) of Coat ECC Imp. Ver. required for complete Sub-assembly of outer & inner jacket of Coat ECC imp. Ver. as per Specification No.S/3558/A/TC-15/Coat ECC with amendment No. 1 to 6 and as per Annexure-'A' Scope of Work.</p>				
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Encl:- As above

CV NORMS FOR COATED AND LAMINATED FABRICS VARIOUS

This documents list out the essential plant and machinery requirement of coated and laminated fabrics various. This documents also list out the essential test equipment requirement of coated and laminated fabrics various.

Scope of Norms is applicable to all types of coated and laminated synthetic fabrics on Essential Plant and Machinery Requirement:-

Preparatory and Weaving Process:-

1. Winding machine
2. Beam Warping Machine
3. Shuttle less looms capable of weaving 100% synthetic fabrics

Processing Machines:- (Wherever applicable)

1. HTHP Dyeing Machine
OR
High Temperature High Pressure (HTHP) Jet Dyeing
OR
Pad Dry and Thermosol on Loop Agers
OR
Pad Dry and thermosol on Hot-flue
2. Printing :-
 - a) Engraving Department/Exposure Plant
 - b) Rotary Printing Machine
 - c) Loop Ager/Agging Machine
 - d) Oxidation and washing
 } OR FLASH AGER MACHINE
3. Calendering Machine
4. Stenter

Coating Machine:-

1. Coating machine :- As per requirement
2. Integrated coating cum laminating machine, wherever applicable
3. Stenter/Padding Mangle:- As per requirement

Note:

- (i) In case of non availability of weaving and dyeing/printing set up, firm must have notarised legal tie up with same firm who must possess all the essential weaving and dyeing /printing (wherever applicable) machineries as stipulated in the norms and it should be verified by the CV team..

Essential Test Equipments:-

1. Conditioning Chamber
2. Weighing Balance
3. Measuring tape/scale
4. Tensile strength tester
5. Thread counter
6. Laundrometer
7. Perspirometer
8. Crockmeter
9. Light fastness tester *
10. Twist tester
11. Air permeability tester

12. Thickness tester
13. Material confirmation test facility
14. Tear strength tester
15. pH meter
16. Spray rating tester
17. Moisture Vapour Transmission Tester *
18. Flex Tester
19. Test facility for resistance to low temperature
20. Test facility for nature of material and coating
21. Hydrostatic Pressure Head Tester
22. Test facility for accelerated ageing
23. Test facility for Blocking
24. Conditioning chamber for humidity and temperature

Note:-

1. *If the firm does not have light fastener tester and MVTR tester the firm should have arrangement with NABL accredited lab for Dye fastness to Light and MVTR test for which a letter from NABL accredited lab should be issued to the firm that they are undertaking testing of samples from the firm.
2. The above list of test equipment is illustrative in nature which may or may not be relevant for certain type of fabric. Therefore at the time of capacity verification, the requirement of test equipment may be verified in accordance with test parameters in the specification and test equipment shall have required range to test the required parameters.

CV Norm of INNER FILLING INSULATION MATERIAL (OUTER JACKET)

SL. NO	ITEM	MANUFACTURING PLANT & MACHINERY		TEST EQUIPMENTS		REMARKS
		ESSENTIAL	DESIRABLE	ESSENTIAL	DESIRABLE	
01.	INNER FILLING INSULATION MATERIAL (OUTER JACKET)	<ol style="list-style-type: none"> Suitable Manufacturing facility for making Thermo Plastic Polymer insulation Batting Sheet Facility to attach Non-woven scrim (liner) fabric Cutting Winding 	Non-Woven scrim (liner) fabric making facility	<ol style="list-style-type: none"> Nature of Material test facility Conditioning Chamber Thickness Tester Test facility for Thermal Insulation (Clo Value) Weighing Balance Compression Recovery Test Facility Tensile strength Tester Test facility for Resistance to Blocking 		

*Note: - If the firm having tie-up with a foreign supplier for the subject item, in that case the firm should have to submit the valid authorization document for such tie-up. However, it will be the discretion of competent authority regarding consideration of such authorization document.

CV Norm of INNER LINING KNITTED FABRIC (OUTER JACKET)

SL. NO	ITEM	MANUFACTURING PLANT & MACHINERY		TEST EQUIPMENTS		REMARKS
		ESSENTIAL	DESIRABLE	ESSENTIAL	DESIRABLE	
01.	INNER LINING KNITTED FABRIC (OUTER JACKET)	1. Knitting Machine 2. HTHP Dyeing Machine		1. Nature of Material test facility 2. Conditioning Chamber 3. Weighing Balance 4. Bursting Strength Tester 5. Water Vapour Resistance Test Facility 6. Test Facility for Dimensional Stability 7. Thread Counter 8. Laundrometer 9. Perspirometer 10. Crock Meter		

CV NORMS FOR 100% SYNTHETIC FABRICS VARIOUS

This document list out the essential plant and machinery requirement of 100% Synthetic fabrics various. This documents also list out the essential test equipment requirement of 100% Synthetic fabrics various.

Essential Plant and Machinery Requirement:-

Preparatory and Weaving Process :-(* See Note below)

1. Winding machine
2. Beam Warping Machine
3. Shuttle less looms capable of weaving 100% synthetic fabrics

Processing Machines:-

1. HTHP Dyeing Machine
OR
High Temperature High Pressure (HTHP) Jet Dyeing
OR
Pad Dry and Thermosol on Loop Agers
OR
Pad Dry and thermosol on Hot-flue
2. Calendering Machine
3. Special Finish Application (Silicone finish etc.)
 - a) Three Bowl padding Mangle
 - b) SS Drying Range
 - c) Curing/Polymerizer
4. Stenter

Note:

*For Parachute fabric, weaving and processing set up is mandatory. For other fabrics the firm shall have processing facility as mandatory, however as far as weaving is concerned it must have notarised legal tie up with other firm who must possess all the essential weaving machineries as stipulated in the norms and it should be verified by the CV team.

Essential Test Equipments:-

1. Conditioning Chamber
2. Weighing Balance
3. Measuring tape/scale
4. Tensile strength tester
5. Thread counter
6. Laundrometer
7. Perspirometer
8. Crockmeter
9. Light fastness tester *
10. Twist tester
11. Air permeability tester
12. Thickness tester
13. Material confirmation test facility
14. Tear strength tester
15. pH meter
16. Flex meter for resistance to flexing
17. Hot Air Oven

Note:-

1. * If the firm does not have light fastness tester , the firm should have arrangement with NABL accredited lab for Dye fastness to Light for which a letter from NABL accredited lab should be issued to the firm that they are undertaking testing of samples from the firm .
2. The above list of test equipment is illustrative in nature which may or may not be relevant for certain type of fabric. Therefore at the time of capacity verification, the requirement of test equipment may be verified in accordance with test parameters in the specification and test equipment shall have required range to test the required parameters.

CV Norm of SET OF INNER FILLING INSULATION MATERIAL 'A' & 'B' (INNER JACKET) THERMO PLASTIC POLYMER

SL. NO	ITEM	MANUFACTURING PLANT & MACHINERY		TEST EQUIPMENTS		REMARKS
		ESSENTIAL	DESIRABLE	ESSENTIAL	DESIRABLE	
01.	SET OF INNER FILLING INSULATION MATERIAL 'A' & 'B' (INNER JACKET) THERMO PLASTIC POLYMER	<ol style="list-style-type: none"> 1. Bale Opener 2. Blender 3. Blower 4. Hopper Feeder 5. Carding Machine 6. Chute Feeder 7. Conveyor 8. Cross Lapper 9. Cooler 10. Cutting 11. Winding 		<ol style="list-style-type: none"> 1. Nature of Material test facility 2. Conditioning Chamber 3. Thickness Tester 4. Test facility for Thermal Insulation (Clo Value) 5. Weighing Balance 6. Compression Recovery Test Facility 7. Tensile strength Tester 8. Test facility for Resistance to Blocking 		

*Note:- If the firm having tie-up with a foreign supplier for the subject item, in that case the firm should have to submit the valid authorization document for such tie-up. However, it will be the discretion of competent authority regarding consideration of such authorization document.