

PAKISTAN NAVY SPECIFICATION No.05/2022 PROMULGATION DATE: 20 APRIL 2022

# SHIRT WHITE LONG SLEEVED FOR DRESS 7 & 8 (FOR CPOs & SAILOR)

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#### **PROMULGATION ORDER**

- 1. This specification is hereby approved and promulgated for information, guidance and compliance by the relevant person.
- 2. The details contained in the specification are to be studied, interpreted and implemented with due regards to the interest of the Service.

#### **SUGGESTIONS FOR AMENDMENT**

1. The specification has been prepared to bring the test methods and procedures in line with up-to-date PN requirements and facilities held in Pakistan. CINS may request to amend any test requirement/ test procedure in light of the experience emanating from its inspection history, through the feedback form placed at Annex G. However, such an alteration will be effective when the amendment is promulgated by this Directorate, and will be effective on the contracts which materialize after the promulgation date of respective amendment.

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# **RECORD OF CHANGES / AMENDMENT**

Amd No	Date	Letter of amendment and description	Signature and Date
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## PN SPECIFICATION 05/2022 SHIRT WHITE LONG SLEEVED FOR DRESS 7 & 8 (FOR CPOs & SAILOR)

#### 0101. **DESIGNATION**

1. Shirt white long sleeved for Dress 7 & 8.

#### 0102. **USAGE**

1. Stitched Shirt white long sleeved worn by CPOs & Sailor with Dress 7 & 8.

#### 0103. INTRODUCTION

- This specification is promulgated by ITD Wing (NRDI) to provide necessary guidance to the potential manufacturers/ suppliers of the items mentioned herein. This specification is to be used for testing and deciding upon acceptance, or otherwise, of the items mentioned. Any alteration/addition in this specification can be suggested to ITD Wing. However, it cannot be implemented/amended without prior approval from NHQ (NS Dte). This specification supersedes/ replace PN/Uniform/ 03 /2001. All other specifications/ Technical details promulgated earlier in relation to the items mentioned herein.
- 2. This specification includes 07 Annexes and consists of 23 pages, including the cover.

#### 0104. **SCOPE**

- 1. This specification covers the requirements of one type of Twill cloth from 100% texturized Polyester and stitching of Shirt white long sleeved for Dress 7 & 8 from approved white polyester cloth. Manufacturing, Inspection, Stowage & Packaging details of Stitched Shirt white long sleeved for CPOs & Sailor. This specification lays down the standards to which the store shown under designation above should conform to. It defines and lays down the quality, standards and details of materials, manufacturing, workmanship and finish. It also lays down the details of testing, inspection (acceptance & rejection), marking, packing and delivery, etc.
- 2. The supplier/ manufacturer shall comply in every respect with the terms of this specification and ensure that the stores under designation conform to it, in all respects.

#### 0105. **RELATED DOCUMENTS**

1. The latest standards and documents that have been referred and relevant to this specification are:

a.	AATCC 20 A	Analysis of fiber
b.	ASTM D 5171	Plastic sew through Flange impact resistance
C.	ASTM D 6322	Test Method associated with Textile Care Procedures
d.	ASTM D-3990	Standard terminology related to fabric defects.
e.	ASTM D 1683	Failure in Sewn Seams of Woven fabrics.

f.	BS 3320	Determination of slippage resistance of yarn.
g.	BS ISO-16322- 1	Determination of Spirality after laundering.
h.	BS EN ISO- 6330	Domestic Washing and Drying procedure
j.	BS EN ISO 13935	Maximum force to seam rupture using grab method.
k.	ISO 2859-1	Sampling Procedure for Inspection by attributes
I.	ISO 3801	Determination of mass per unit Length and Mass per unit Area
m.	ISO 7768	Test method for accessing Smooth Appearance of fabric after cleansing
n.	ISO 7211- 2	Determination of No of Threads per unit length
	ISO 7770	Test method for accessing Smooth Appearance of seam after cleansing

#### 0106. **DEFINITIONS & ABBREVIATIONS**

1. Definitions for the terms used in this standard are given at Annex A.

#### 0107. TECHNICAL DETAILS

1. The technical details of Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) is enclosed at Annex B.

#### 0108. SCHEDULE OF MEASUREMENTS

1. All measurement Schedule of Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) are given at Annex C.

#### 0109. **TECHNICAL DRAWINGS**

1. All technical drawings of Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) are given at Annex D.

#### 0110. MANUFACTURING GUIDE LINE

- 1. White fabric used for the stitching of shirt is to be approved by NHQ (NS Dte).
- 2. Shirt white long sleeved for Dress 7 & 8 are to be manufactured as per measurement schedule and drawing at Annex C & D, respectively.
- 3. The shoulder strap shall be made of same fabric shirt white long sleeved for Dress 7 & 8 with fused buckram in it.
- 4. The shoulder strap shall be attached/ stitched at crown of sleeve such that center of the flaps shall be secured with buttons on the other end near neck.
- 5. Shoulder straps button shall be stitched 01 inches distance from the collar tack.

- 6. Size of shoulder strap may vary according to the size of the dress.
- 7. Buttonholes are to have at least 22 stitches per 2 cm and to be bar-tacked or taper barred.
- 8. All dress are to be made to a high standards and sound tailoring production techniques are to be applied in their construction.
- 9. Stitches per inch for sewing and over locking thread is 7/8 stitches.
- 10. All joints at shirts have single needle stitching with overlock.
- 11. The sewing thread should match with the main fabric spun polyester and having following parameters:

a.	Linear density of stitching thread	Top thread 20/2 (59.05 Tex)	Bottom thread 29/3( 61.09 Tex)
b.	Count CV%	0.92	0.90
C.	Strength cN	3000	3400
d.	Strength CV %	3.76	3.25
e.	Tenacity cN/Tex	51	57
f.	Elongation %	20.24	21.32
g.	Twist(T/M)	601	611

- 12. Unsaturated Polyester Buttons used should be Mat finished, 4 holes, 18 L for shirts, white in colour.
- 13. 06 buttons shall be used at distance of 4.00-4.50 inches w.r.t sizes in shirts.
- 14. Distance between first two buttons is 04 inches.
- 15. The button is to be fastened with same matching colour thread with cross sewing neatly.
- 16. Reinforcement stitching (less No of stitch per inch) will be applied at collar end, and full selves Shirt white long sleeved for Dress 7 & 8.
- Good guality of bukram/ fusing shall be used in collar and also in cuff.
- 18. All joints of shirts will be secured through single needle stitching and over locked.
- 19. The collar is to be free from distortion.
- 20. Two spare buttons on shirt are to be provided/ stitched on the garment at suitable place/ care label.
- 21. Care label instruction shall be attached with shirts.

22. Strict compliance of Quality Control and Quality Assurance parameters will be implemented through Internal /External audit teams, before commencement of PN Inspection.

#### 0111. QUALITY OF WORKMANSHIP AND FINISH

- 1. Workmanship and finish of the Shirt white long sleeved for Dress 7 & 8 shall be equal to the reference/approved sample/ sealed pattern. It shall be the best of its class and to entire satisfaction of the INS.
- 2. The stitched Shirt white long sleeved for Dress 7 & 8 shall confirm the parameters define at Annex B of this specification.

#### 0112. **TESTING**

1. The material along with accessories used in stitching of Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) will be required to assure quality parameters mentioned at Annex B of this specification. Inspecting authority reserves the right to get any B/R samples tested from any reputable/accredited Laboratory other than PN i.a.w. Annex B or any other quality parameters e.g. Seam strength, buttons strength, etc. in order to check its suitability/ quality. Firm is liable to pay all the testing charges.

#### 0113. BATCH/ LOT SIZE AND NO. OF SAMPLES

1. No of samples drawn from bulk quantity/ offered store for TSR /Advance sample testing, should be as per instructions of Inspecting Officer or according to following table:

Batch/ Lot Size	No. Samples
300 ≥800	05
801≥22000	10
22001and over	15

#### 0114. TENDER SAMPLE

- 1. Tender sample is to be approved by TSR Committee.
- 2. For each tender 05 x samples of shirt of shirt white long sleeved for Dress 7 & 8 shall be supplied by the manufacturer at the time of tendering along with samples of materials (used in Stitching of shirt) and Quality Assurance Report (test report) from any accredited laboratory.

#### 0115. ADVANCE SAMPLE OR PRE-PRODUCTION SAMPLE

1. Advance sample or pre-production sample, when required, shall be submitted in accordance with terms of the contract for inspection and testing as per Annex B and approved by CINS.

- 2. Whenever Tender, Advance or pre-production sample is not required, the suppliers/ manufacturer are advised in their own interest to submit to the Inspecting Officer or his representative an initial delivery of One % of the contract.
- 3. For each contract following material shall be supplied by the manufacturer at the time of advance samples/ preproduction/ tendering:

a.	Shirt white long sleeved for Dress 7 & 8	05x Nos
b.	Stitching Thread and over locking	50x Grams/ 01 reel
C.	Care Label/ Washing Instruction	10x Pieces
d.	Buttons	10x pieces
e.	Buckram /fusing	05 x meters

- 4. The approval of the sample, authorizes the commencement of bulk production but does not relieve the suppliers/ manufactures from compliance with all the provisions of this specification.
- 5. One approved sample after rectification of all observations highlighted by Inspecting Officer/ end user shall be properly sealed by INS and returned to the firm for guidance; rest of the approved sample shall be retained by INS for future use in bulk Inspection.(If deemed necessary).
- 6. The Pre-production sample shall be manufactured by the manufacturer with the same facilities which will be used for manufacturing of the bulk items.
- 7. Firm shall provide advance sample along with quality verification reports from an accredited laboratory, whenever asked/ required by Inspecting authority to ensure compliance of quality assurance parameters during production/ final internal inspection.

#### 0116. **INSPECTION**

- 1. <u>Bulk representative sample</u>. B/R random sampling will be carried out as per rules in vogue.
- 2. <u>Bulk Inspection</u>. Bulk inspection will be carried out after satisfactory completion of Visual Examination and Testing of B/R Sample.
- 3. <u>Inspection of Stitched shirt white long sleeved for Dress 7 & 8.</u> 100% of the offered/ store shall be inspected as per procedure in vogue OR predefine Stage inspection OR as per Annex F (AQL).
- 4. <u>Inspection/ Acceptance and Rejection of Stores</u>. Inspection/ acceptance is to be carried out to the entire satisfaction of Chief Inspector of Naval Stores and also as per instruction/ procedure laid down in Official unit order instruction.
- 5. Common defects in garments is enclosed as Annex E for consultation/ guideline. However these guide lines may be considered by Inspecting officer in addition to Unit Instruction Order or as per order of Inspecting Authority.

- 6. The Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) shall be examined for the correctness of material, shape, design, dimension, size, workmanship and finish.
- 7. CINS reserves the right to reject the whole supply in case, upon examination, material or packing of any sample or portion of the consignment is found NOT CONFORMING the parameters laid down in this specification or the quality of product does not seems up to the mark.
- 8. If on examination of 5% of any delivery, 20% of those examined from bulk supply are found NOT CONFORMING to this specification in respect of the pattern, dimensions, workmanship and finish, the whole consignment may be rejected without any compromise.
- 9. All stores and packing NOT fully in accordance with this specification shall be rejected.
- 10. <u>Responsibility for Safety</u>. The supplier/manufacture is wholly responsible for the safety of supplies during inspection, storage at firm's premises, proper packing, dispatch and delivery up to consignee.
- 11. The CINS is the authority in all matters pertaining to Inspection.
- 12. <u>Stamping of Accepted/ Rejected Stores</u>. Following instructions are to be followed:
  - a <u>Stamping of Accepted Stores</u>. Each acceptable Shirt white long sleeved for Dress 7 & 8 shall be stamped with Inspector's Individual Acceptance mark or as per Instructing of Inspecting Authority. The stamping shall be legible.
  - b <u>Stamping of Rejected Stores</u>. The rejected Shirt white long sleeved for Dress 7 & 8 shall be marked with Inspector's Rejection marked at the back/ visible place of Shirt white long sleeved for Dress 7 & 8 to avoid re-submission by the supplier.

#### 0117. SPECIAL INSTRUCTIONS

- 1. <u>Care Instructions</u>. Care instructions in English and Urdu shall be attached with each Shirt white long sleeved for Dress 7 & 8 as indicated in the drawing and have minimum requirement as follows:
  - a. Ironing Procedure.
  - b. Washing/ Dry cleaning procedures.
  - c. Any Prohibition e.g. Do not use bleach / chlorinated water.

### 0118. PACKING DETAILS

1. The store when ordered to be delivered 'PACKED' shall be packed as per following instructions:

- a. Each Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) shall be properly folded length wise.
- b. The Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) shall be packed in a neat, dry and clean condition in polyethylene bag of thickness of 0.06mm (± 0.01mm) and suitable size.
- c. Carton consist of following parameters:
  - (1) Carton of 05 ply is used for packing.
  - (2) Weight of outer ply is 180± 5 gm.
  - (3) Inner paper ply weight /m<sup>2</sup> 180± 5 gm.
  - (4) Corrugated paper weight/m<sup>2</sup> 120± 5 gm.
  - (5) Paper pasted with corrugated sheet 120± 5 gm.
- d. 20 x shirts shall be further packed, separately in a thick Boxboard/corrugated Carton/ Flouring.
- e. Each Box Board packing shall be securely and properly packed.
- f. Each box board shall consist of same size.

#### 0119. IDENTIFICATION LABEL

- 1. Each Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor) shall bear following minimum information attached with Stitched Shirt white long sleeved for Dress 7 & 8 (For CPOs & Sailor):
  - a. Item name/ item description with NSN/Pattern No.
  - b. Material Composition.
  - c. Contract number and Date.
  - d. Year of manufacture.
  - e. Contractor's name, initials, or trade mark.
  - f. Batch N.o/ Bar code.
  - g. Identification of face at suitable places.
  - h. Size sticker.

#### 0120. PACKING LIST

1. Firm is bound to provide a packing list of store offered for inspection along with the challan and each packed box giving full, which include complete details about the store i.e. Pattern No., Description of Store, size, quantity, Contract No, & date, challan No & date, I/Note No. or Voucher No. with date, Consignee, Firm's Name, Date of packing, Packer's Signature and Stowage/ Stacking Instruction.

#### 0121. MARKING OF STORES

- 1. In addition to any special marking required by contract or order, the marking of packages shall be stenciled with quick drying Black ink/ Paint in accordance with Specification No. NS/MISC/002/80 with clearly defined characters as described below:
  - a. On Front and Top:
    - (1) Consignee Address.
    - (2) Contract No and date.
    - (3) Description of Stores Packed and NSN/Patt no.
    - (4) Stowage / Stacking Instruction.
    - (5) Quantity of the Item/ Stitched Shirt white long sleeved for Dress 7 & 8 packed.
    - (6) Weight of the Carton.
  - b. On Back:
    - (1) Manufacturers name / Firm's name.
    - (2) Voucher No. or Inspection Note No. and date.
    - (3) The No. of individual Package and the total No of Packages in the consignment joined by the word 'of 'e.g. 2 of 300.
    - (4) Weight of the package.
    - (5) Month and year of packing.

#### 0122. **DELIVERY**

1. The store shall be delivered in Brand new, clean and dry condition.

XXXXXSDXXXXX

Anne	exes:	MUHAMMAD AFSAR Captain Pakistan Nav Director
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#### ANNEX A TO PNSPECIFICATION NO.05/2022 PROMULGATION DATE 20 APR 22

#### **DEFINITIONS & ABBREVIATIONS**

#### 1. **DEFINITIONS**

- a. Following definitions are used in this specification and will be adopted for use:
  - (1) <u>Inspector</u>. The term inspector shall include the "Inspection Authority", Inspecting Officers and their representatives, duly authorized for the purpose of discharging inspection duties involved.
  - (2) <u>Inspection Authority</u>. Chief Inspector of Naval Stores (CINS). His verdict in respect of Sealed Inspection matters is to be taken as final.
  - (3) <u>Inspecting Officers</u>. An Officers nominated by the CINS for carrying out inspection of stores supplied by the supplier, against a specified contract or order, in accordance with the particulars stipulated therein.
  - (4) <u>Acceptance Quality Levels (AQLs)</u>. It represent allowable limit/ tolerance of defects or non-conformities in an offered store/ lot/ batch. It represent in percentage, also known as Allowable Quality Limits.
  - (5) <u>Minor Defects</u>. They are small insignificant issues that don't affect the function or form of the item. Highest tolerance of AQL has been set for minor defects.
  - (6) <u>Major Defects</u>. They would likely result in product return but don't poses safety risk. AQL tolerance depend upon the description/ quality of finished product.

#### 2. **ABBREVIATIONS**

- a. Following abbreviations are used in this specification and will be adopted for use:
  - (1) <u>CINS</u>: Chief Inspector of Naval Stores.
  - (2) <u>DITD</u>: Directorate of Indigenous Technical Development.
  - (3) <u>DNS</u>: Directorate of Naval Store.
  - (4) PNCSD: Pakistan Navy Clothing Store Depot.
  - (5) PNCTA: Pakistan Navy Central Testing Authority.

# ANNEX B TO PNSPECIFICATION NO 05/2022 PROMULGATION DATE 20 APR 22

# **TECHNICAL DETAIL**

S. No	Item	Standards	Requirement		
1.	Shirt white long sleeved for	or Dress 7 & 8	Parameters of white fabric as per approved sample of white fabric Dress 1 &3 by NHQ (NS Dte)		
2.	Whole Shirt white long sleeved for Dress 7 & 8 (appearance after 05/10 cycles at 60/40 °C of laundering)	BS EN ISO 6330			
	a. Colour	Visual	GS 4 & No paleness/ dullness , are not permissible.		
	b. Spirality	ISO 16322	01 %		
	c. Wrinkles/ Smooth appearance	ISO 7768	SA 4 or better		
	d. Seam	ISO 7770	No pucker		
	e. For buckram/ fussing	Visual/ Manual	No Adhere bond, bubble, cracking observed		
	f. For buttons		No Detachment, discoloration, distortion or removal of any protecting coating observed		
3.	Seam Strength	ASTM D 1683	240-260 lbs		
4.	Sewing Thread (For stitching/ Over locki				
	a. Material	AATCC 20 A	100 %Polyester		
	b. No of stitches per inch(SPI)	Visual/ Manual	7/8		
	c. Shade		White or Match with main fabric		
	d. Construction		Spun Thread		
5.	Buckram/ Fussing	T			
	a. Material	AATCC 20 A	Cotton		
	b. Wt/ Sq mtr	ISO 3801	162 g/m <sup>2</sup>		
	c. Shade	Visual	White/ matched with base fabric		
	d. Threads/ 2.5cm (1) Warp (2) Weft	ISO 7211/2	66 53		

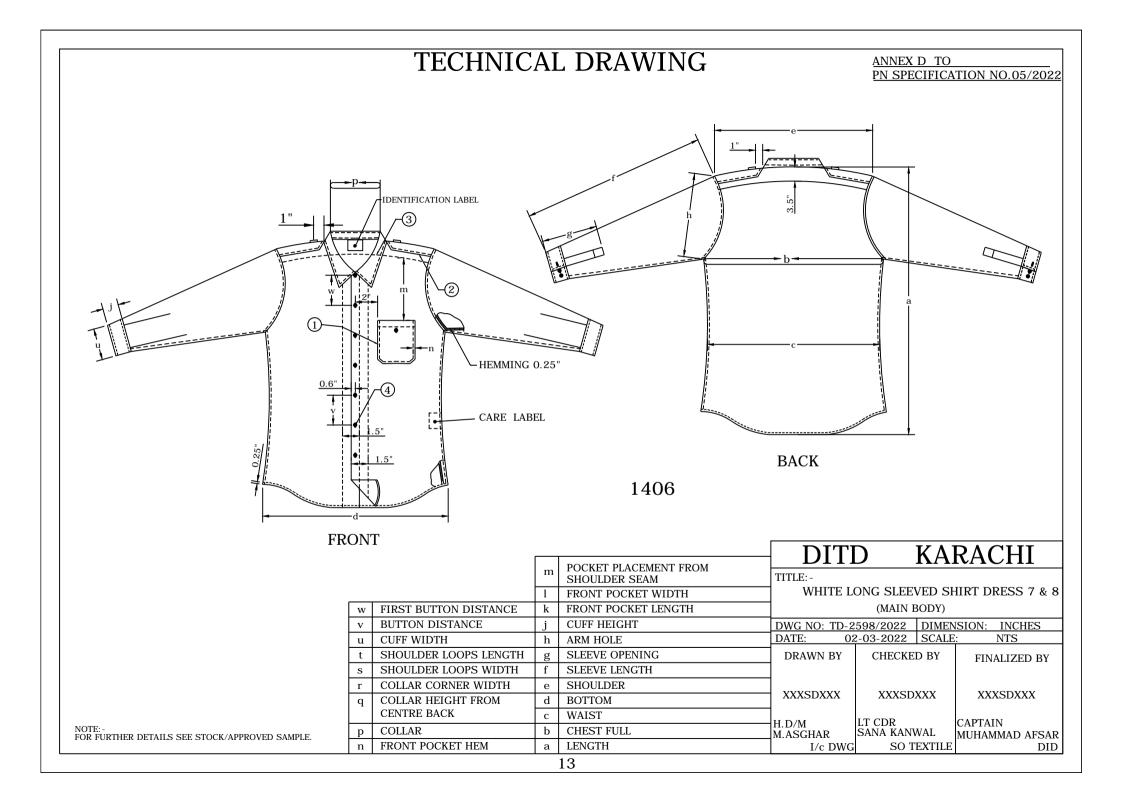
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6.	<u>Buttons</u>			
	a. Material		Chemical	Unsaturated polyester resin/
			Analysis	Polymeric material
	b. Impact t	est	ASTM D 5171	No cracks, chips or breakage
	(67mm)			
	c. Size (Ligne)		Visual/ Manual	
	(1) For shir	ts		18 L-
	d. Thickness		Visual/ Manual	
	(Internal)			02mm
	(1) For Shir	rts		

### ANNEX C TO PN SPECIFICATION NO 05/2022 PROMULGATION DATE 20 APR 22

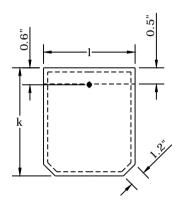
# **SCHEDULE OF MEASUREMENTS**

S. No	Description	32	34	36	38	40	42	44	46	48	50	52	54	TOL
	Sizes	1	2	3	4	5	6	7	8	9	10	11	12	
a.	Length from center back.	30	30	30	30	32	32	32	34	34	34	34	34	±1
b.	Chest .full	38	40	42	44	46	48	50	52	54	56	58	60	±1
C.	Waist.	37	39	41	43	45	47	49	51	53	55	57	59	±1
d.	Bottom.	38	40	42	44	46	48	50	52	54	56	58	60	±1
e.	Shoulder.	16.5	17	18	18.5	19	19.5	20	21	21	21	21.5	21.5	±0.5
f.	Sleeve Length.	24	24	24	25	25	25	26	26	26	26	26	26	±0.5
g.	Arm hole.	8	2.5	8.5	8.75	9	9.25	9.5	9.75	10	10.25	10.5	10.75	±0.38
j.	Cuff height.	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	±0.13
k.	Front pocket length including flap.		L					6						±0.25
l.	Front pocket width							5						±0.25
m.	Front pocket placement from shoulder seam	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	±0.25
n.	Front pocket hem.	0.375	0.375	0.375	0.375	0.375	0.375	0.375	0.375	0.375	0.375	0.375	0.375	±0.13
p.	Collar.	14.5	15	15.5	16	16	16.5	16.5	17	17.5	17.5	18	18.5	±0.25
q.	Collar height from center back.	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	±0.13
r.	Collar corner width	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	±0.15
S.	Shoulder loop width	2	2	2	2	2	2	2	2	2	2	2	2	±0.13
t.	Shoulder loop length	5.75	6	6.25	6.5	6.5	6.5	6.5	6.5	6.5	7	7	7	±0.25
u.	cuff width/ length	9	9.5	9.5	10	10	10.5	10.5	10.5	11	11	11	11	±0.25
V.	Front Button Distance		1	4	1		4.25			ı	4.50	1	ı	±0.15
W.	First Button Distance	4 ±							±0.15					

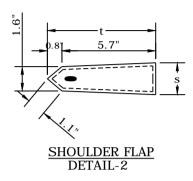


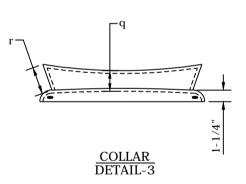
## TECHNICAL DRAWING

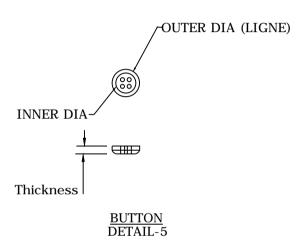
#### APPENDIX I TO ANNEX D TO PN SPECIFICATION NO.05/2022



POCKET DETAIL-1







1407

#### **KARACHI** TITLE: -WHITE LONG SLEEVED SHIRT DRESS 7 & 8 (SMALL PARTS) DWG NO: TD-2599/2022 DIMENSION: INCHES DATE: 02-03-2022 SCALE: NTS DRAWN BY FINALIZED BY CHECKED BY XXXSDXXX XXXSDXXX XXXSDXXX CAPTAIN MUHAMMAD AFSAR H.D/M LT CDR M. ASGHAR SANA KANWAL DID SO TEXTILE I/c DWG

NOTE: - FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE.

# ANNEX E TO PN SPECIFICATION NO 05/2022 PROMULGATION DATE 20 APR 22

# **COMMON DEFECTS IN GARMENTS**

S.No	<u>Defects</u>	<u>Major</u>	Minor
1.	Needle hole	Major	
2.	Skipped stitches		O'V
3.	Threads break		
4.	Broken stitches		
5.	Seam pucker		
6.	Pleated/ defected seam	major >1cm	minor< 1cm)
7.	Wrong stitch density	Major at front	Minor at back
8.	Uneven stitch density		
9.	Oil stains/ marks		
10.	Reversed garments parts	Major	
11.	Wrong shade of thread used.		
12.	Open seam	,	
13.	Stitch end		Minor
14.	Asymmetry	major	
15.	Any missing accessories		
16.	Malfunction of zippers		
17.	Button inside out		
18.	Damaged button		
19.	Button hole too small		
20.	Omitted button hole		
21.	Uncut/ partial cut button hole		
22.	Ragged edges of button hole		minor
23.	Broken button hole stitches	Major	
24.	Misaligned/ misplaced button and holes		
25.	Fussing bubbles/ wrinkles on buckram		Minor ( if it's too small)
26.	Fussing (after several wash) bubbles/ wrinkles on collar / cuffr	Major	

ANNEX F TO PN SPECIFICATION NO 05/2022 PROMULGATION DATE 20 APR 22

#### **ACCEPTABLE QUALITY LEVELS (AQL) FOR INSPECTION**

1. Acceptable Quality Level (AQL) is maximum average defective items in a lot or limit / percentage of defective items in product /offered store. It is expressed in a percentage. Number of average defective items is determined by following formula:

Average defective item=  $\frac{\text{No.of defective item found during inspection}}{\text{Total no.of item to be inspected}} \times 100$ 

2. AQL process: it is used for inspection of finished product / garment by the QC professionals. AQL standard is depend on the quality of the product to be inspected, random sampling, and experience of inspector. Normally lower figure AQL standard e.g. 01% is used for high quality products/ narrow width fabric and high figure AQL standard e.g. 10% for low quality product/ garment. AQL standard 2.5% means that allowable limit of defective item is 2.5% of total items inspected .Usually AQL 2.5% is used for major defects, AQL 4.0% is used for minor defects and AQL 6.5% is used for slight defects, however zero acceptance for critical defects Allowable limit of Major defects are less than minor defects and it depends upon nature of item /offered store. It can be less than 01% or greater than 10%. .Following AQL table is used to determine lot size/ offered store quantity, least No. of sample to be inspected, AQL %, and acceptance & rejection points:

<u>SINGLE SAMPLING PLAN FOR NORMAL INSPECTION OR AS PER ORDER OF INSPECTING OFFICER.</u>											
Lot size	Least	Allowable Quality levels( AQL) %									
	No. of	Acceptable/ Allowable defective sample (Ac)									
	sample to	,								e iten	ı (Re)
	be	1.5%		2.5%		04%		6.5%		10%	
	Inspected	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
281-500	20-80	1-3	2-4	1-5	2-6	2-7	3-8	3-	4-11	5-	6-
								10		14	15
501-	32-125	1-5	2-6	2-7	3-8	3-	4-11	5-	6-15	7-	8-
1200						10		14		21	22
1201-	50-200	2-7	3-8	3-	4-	5-	6-15	7-	8-22	10-	11-
3200				10	11	14		21		21	22
3201-	80-315	3-	4-	5-	6-	7-	8-22	10-	11-22	14-	15-
10000		10	11	14	15	21		21		21	22
10001-	125-500	5-	6-	7-	8-	10-	11-	14-	15-22	21	22
35000		14	15	21	22	21	22	21			
35001-	200-800	7-	8-	10-	11-	14-	15-	21	22	21	22
150000		21	22	21	22	21	22				
150001-	315-1250	10-	11-	14-	15-	21	22	21	22	21	22
500000		21	22	21	22						
500001-	500-2000	14-	15-	21	22	21	22	21	22	21	22
above		21	22								

3. If the inspector have time constrain then AQL is beneficial/ helpful in inspection of whole lot/ offered store. It safe time, cost and give effective/ statistical result of product /offered store e.g. If inspector needs 5 minutes to check the item, the quantity to be inspected is 2,500 items then it took 208 hours to check the whole consignment/ offered store.it means 26 days approx. for one store. Calculation is as follows:

$$\frac{5 \min \times 1 \, hr}{1 \, item \, \times 60 \, min} \times 2,500 \, items = 208.33 \, hrs \cong 26 \, days$$

After Implementing AQL standard so the sample taken from the lot/ offered store is 200 items/ sample:

$$\frac{5 \min \times 1 \, hr}{1 \, item \, \times 60 \, min} \times 2,00 \, items = 16.66 \, hrs \cong 02 \, days$$

4. Quality parameters/ AQL limits may be defined by Inspecting Authority (if deemed appropriate) and communicate to the manufacturer, so the manufacturer set their quality levels (AQL limits) accordingly for their internal audit. Therefore, good quality product is ready for inspection.

# ANNEX G TO PN SPECIFICATION NO 05/2022 PROMULGATION DATE 20 APR 22

## **FEED BACK FORM**

Unit Name:	
Item Description#:	
Issue/Problem occurred:	
PN SPEC #:	
Possibility to resolve Issue:	
Any Other Remarks:	0,3

#### Note:

- It's good to give feedback for improvement in any clothing Item.
- Recurring problem will also be intimated through this form.

Name Stamp

COUNTERSIGNED By CO/Admin Authority
Name Stamp

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