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PRIVATE SPECIFICATION

Prepared for

The South African Navy

COLD WEATHER JACKET

(with a detachable hood)

SAN 101

Revised October 2004

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1. Scope

This specification covers the material, cut and make of cold weather jackets for the personnel of the South African Navy.

2. Definitions

acceptable: acceptable to the Directorate of Naval Logistics.

nominal: subject to the tolerances normal to good manufacturing practice.

3. Style

- single breasted with square fronts
- two-way collar
  - incorporating a collar tab
- jacket and hood fully lined
  - knitted pile fabric lining
- concealed front slide fastener
- storm flap that fastens with buttons and buttonholes
- slanted welt pocket
- pencil pocket with a flap
- plain back
- long set-in sleeves
  - reinforcing elbow patches
  - storm cuffs
- shoulder straps
- draw-cord in the hem
- detachable hood with draw-cord
- National flag badge on the left sleeve

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4. Illustrations

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5. Materials - General

No materials will be supplied by the South African Navy, except for the embroidered national flag, NSN 8345-18 177-7789 (see Annex A).

- The materials specified in 6 and 7 are to be supplied and used by the manufacturer and their colour shall be an acceptable match to the colour of the outer material

A trim chart containing a sample of each component material (as given in 7) must accompany the pre-production samples

6. Outer material

The outer material to:

- be a worsted gaberdine, water repellent that comply to type 59K of SANS 346 "Woven worsted fabrics"
- be a match, in terms of SANS 10076-5 "The assessment of defects in textile piece-goods and made-up articles Part 5: Defects in woollen and worsted piece-goods", to colour No. 34c-97 "Oxford blue" of CKS 129 "Colour for textiles" (unless otherwise permitted by the South African Navy)
  (Three metres of fabric must be submitted for colour re-registration purposes: See annexure A)

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7. Component materials

Tenderer's comments

7.1 Lining

- an acceptable sliver high-pile fabric ("fake fur")
- shall comply with the requirements as given in Table 1

Table 1

1	2	3
Property	Requirement	Test Method
Composition		
Foundation.....	100% Polyester fibre	ATTCC method 20
Pile.....	100% Acrylic	ATTCC method 20
Nominal depth of pile, mm.....	7	SANS 85
Mass per g/m² (min).....	350	SANS 5385
Number of wales per cm (min).....	5	SANS 5275
Number of courses per cm (min).....	10	SANS 5275
Permissible number of defects 1) LAQ for a piece – 10 2) LAQ for a lot – 8		

7.2 Reinforcing material

- polyester-core cotton duck ripstop
- shall comply with type D350-P of CKS 553 "Unproofed core-spun ducks"
- nominal mass of 350 g/m²

7.3 Interlining

- fusible non-woven interlining
- that complies with the requirements of CKS 627 "Fusible interlinings"
- suitable for use in garments that are dry-cleaned or hand washed

The selection of interlining of appropriate mass per unit area to be determined by consultation with the supplier of the interlining.

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Tenderer's comments

7.4 Draw-cords

- an acceptable nylon or polyester draw-cord
- of nominal circumference 8 mm
- ends shall be capped with plastics toggle

7.5 Slide fastener

- one-way open-end
- synthetic elements

- shall comply to performance class C or D of SANS 1822 "Slide fasteners"

7.6 Touch and close fastener

- shall comply to the requirements of SANS 1823 "Touch and close fasteners"
- nominal width 25 mm

7.7 Buttons

- 4-hole plastics, rimmed buttons
- nominal diameter 20 mm and 22 mm
- dope-dyed
- fully impregnated

7.8 Metal eyelets

- of nominal inside diameter 6 mm
- to be coated to match the outer material
- to have brass metal washers
  - corrosion resistant

7.9 Ribbing

- an acceptable quality high-bulk acrylic 3 X 3 rib

7.10 Threads

- to comply with relevant requirements of SANS 1362 "Sewing threads"
- colour to be an acceptable match to the colour of the outer material
  - white thread shall be used for the stitching of the National flag badge

Sewing, buttonhole and top-stitching thread:

- mercerised cotton thread
- ticket No. 80

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8. Workmanship

The jackets shall be:

- cut and made with first-class workmanship throughout
- of uniform and acceptable make, colour and finish

Shall be free from:

- defects, that affect their appearance or may affect their serviceability (or both)
- marks
- spots
- stains, incurred in the making-up

Seams and stitches shall be:

- smooth and uniform
- free from twists, pleats and puckers
- sufficiently extensible to avoid seam cracking and undue shrinkage in use

Ends of sewing shall be:

- trimmed and loose threads removed
- back-tacked if unsecured

9. Sizes

The patterns shall conform to the specification and shall be drafted by the manufacturer.

Jacket measurements:

MEASURING POINT		DESCRIPTION
A - A	Chest circumference	Measure at the base of the scye, with garment spread completely flat, and multiply by two.
C – C	Back length	Measure from the centre back neck seam to the bottom edge of the garment.
A – B	Sleeve length	Measure from the base of the scye to the outer edge of the sleeve.
D - D	Face opening	Measured from the crown(top edge) at centre front to bottom hem
E - E	Hood width	Measured across the centre of the hood

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Table 2 - size range

1	2	3	4	5	6	7
National Stock No.	Size desig-nation	Nominal, finished garment measurements, cm				
		Chest circum-ference	Back length	Sleeve length	Hood width	Face opening
8415-18-175-2009	Small	115	88	50	27	39
8415-18-175-2028	Medium	125	91	53	28	39
8415-18-175-2030	Large	135	93	55	29	39
8415-18-175-2032	X-large	145	95	55	30	40
8415-18-175-2034	XX-large	155	97	56	31	40

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10. Make

Tenderer's comments

Illustrations are not to scale and are for guidance only, and unless inconsistent with the text, all measurements are nominal.

10.1 Fronts

Fronts shall:

- each have a slanted welted side pocket
- have a breast pencil pocket with a flap on the left front
- have a concealed slide fastener
- have six buttons on the right front
- have two 20 mm buttons
  - positioned around the body-to-collar seam
- have a storm flap
- each have a facing

Storm flap shall:

- be a grown-on storm flap
- be of finished width 60 mm on the left front only
- be interlined with fusible interlining
- extend from the gorge seam to the bottom hem edge
- be fitted with six buttonholes
- have a 2 mm edge-stitching below the gorge seam
- have a 8 mm top-stitching along the front edge
- have top-stitching 70 mm from the front edge
  - attaching the facing to the front

Front facing shall:

- be of outer material
- be of finished width 55 mm throughout
  - may be pieced once only
- be interlined with fusible interlining
- extend from the gorge seam to the bottom hem edge

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Slide fastener shall:

- have the appropriate stringer sewn to each front
  - left stringer (with slider) shall be sewn to the center front on the inside of the left front between the storm flap facing and the front facing
  - right stringer shall be sewn to the centre front of the right front, sandwiched between the front edge and the front facing
- extend from the gorge seam to 70 mm above the bottom hem edge

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Tenderer's comments

10.2 Back

Back shall:

- be plain
  - no centre back seam
- be fitted with two buttons

10.3 Pockets

Side pockets shall:

- be welted pockets
- be slanted towards the front of the jacket
  - approximately 10 degrees
  - bottom edge 16,5 cm from the bottom hem and 90 mm from the side seam on size X-Large
- have pocket bags of outer material
  - of finished depth 10 cm below the lower edge of the welt
  - of finished width 17 cm (measured at the lower edge of the welt)
- have a pocket mouth opening of finished length 16,5 cm
- have a welt of finished width 20 mm
  - securely bar-tacked at both ends

Breast pencil pocket

Breast pencil pocket shall:

- be a patch pocket with a flap
- be sewn to the left front breast area
  - positioned 21 cm from the neck-shoulder point and centrally between the centre front and armhole seam on size designation medium
- be of finished width and depth 60 mm and 15 cm respectively
- have a pocket mouth hem of finished depth 25 mm
  - securely bar-tacked at both ends
- be turned-in 10 mm at the side and bottom edges and stitched down 2 mm from the turned-in edge
- have a male section of touch and close fastener
  - of finished length 30 mm
  - centrally positioned in line with the top edge of the pocket mouth
- have an eyelet
  - positioned 10 mm above the bottom edge of the pocket (for drainage)
  - centrally positioned

Flap shall:

- be of outer material
- be lined with outer material
- be interlined with fusible interlining
- be of finished width and depth 65 mm and 40 mm respectively
- be edge-stitched 8 mm from the free ends
- be sewn 10 mm above the pocket mouth edge

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- be stitched down 5 mm, turned over and stitched down 8 mm from the turned over edge
- be bar-tacked horizontally at both ends
- have a female section of touch and close fastener
  - of finished length 30 mm
  - securely attached in the corresponding position to the male section on the pocket

10.4 Lining

Lining shall:

- correspond to the shape of the jacket (fully lined)
- be attached to the bottom hem, collar-to-neck seam and front facing
- fit snugly and seams to be smooth
- have a reinforced patch at each underarm
  - of outer material
  - semi-circular patch
  - of finished width and depth 16 cm and 90 mm respectively
  - positioned centrally over the side seam on the pile lining and seamed together with the armhole lining seam
  - raw edges shall be bound with outer material and stitched to the lining
  - to be fitted with a loop
    - of outer material
    - of finished width 15 mm and length 90 mm
    - horizontally positioned at the centre of the patch
    - bar-tacked at both ends

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10.5 Collar

Collar shall:

- be a two-way collar
- be of pile fabric (top collar)
- be lined with outer material (under collar)
  - be interlined with fusible interlining
- be centred at centre front
- be of finished width 10 cm at the centre back and 80 mm at the front edges
- have a collar tab
- have two buttons on the right side of the under collar
  - first being 30 mm from the front edge of the collar
  - second being 30 mm (centres) from the first button (for adjustment purposes)
- have one button on the left side of the under collar
  - in corresponding position to the buttonhole on the collar tab, when turned back (when not in use)

Throat tab shall:

- be of outer material
- be interlined with fusible interlining
- be lined with outer material
- have a rounded free end
- be of finished length and width 75 mm and 50 mm respectively
- be sewn between the top collar and under collar seam, 10 mm above the base of the left edge of the collar
- have a buttonhole in the centre
  - of finished length 25 mm
  - neatly made, gimped and barred
  - positioned 10 mm from the rounded edge
- have 8 mm edge-stitching along the free edges

10.6 Sleeves

Sleeve shall:

- be long, set-in sleeve
  - seamed under the arm
- have four eyelets in the underarm near the scye (for ventalation)
  - shall not penetrate the lining
  - positioned 20 mm either side the underarm seam
  - first being 20 mm from the armhole seam and the second being 30 mm from the first eyelet
- have a reinforced patch at the elbow
  - to be of reinforcing material
  - of finished width and length 13 cm and 21 cm respectively
  - rounded corners
  - turned-in and stitched down 2 mm and 7 mm respectively
- have a National Flag badge
  - sewn on the left sleeve
  - centrally positioned 30 mm below the crown
- have a separate cuff

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Cuff shall:

- be of double folded outer material
- of finished width 60 mm
- stitched 20 mm from the free edge and 2 mm from the joining seam
- have storm cuff of double folded ribbing
  - of finished width 45 mm
  - stitched to the pile sleeve lining and the hem of the cuff lining (shall not protrude when the jacket is worn)

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10.7 Shoulder straps

Shoulder strap shall:

- be of outer material
- be interlined with fusible interlining
- be lined with outer material
- have mitred ends
  - of finished with 55 mm at the sleeve seam tapering to 40 mm at the neck
- be positioned with the centre of the strap being 5 mm forward of the natural shoulder line
- be of finished length such that it fastens 30 mm from the neck seam
- have a buttonhole 20 mm from the base of the mitre
  - of finished length 25 mm
  - neatly made, gimped and barred
  - centrally positioned
- be edge-stitched 6 mm from the free edges

10.8 Hood

Hood shall:

- be of outer material and cut in two equal parts
  - joined together
  - seam to be top-stitched 8 mm
- be detachable
- be cut accordingly to ensure an acceptable fit over headgear

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- be fully lined with pile fabric
- be faced at the front edge with outer material
  - of finished with 40 mm, forming a tunnel
  - inside edge joined to the pile lining
- have a hem of finished width 45 mm at the neck
- have an eyelet at each bottom front edge
  - positioned 60 mm from the bottom edge and 20 mm from the front edge
  - through the outer layer only
- have a draw-cord inserted into the tunnel and shall protrude 25 cm from either side of the eyelet before adjustment
  - securely stitched at the centre of the forehead
- have a strap
  - to be of double folded outer material
  - of finished width and length 28 mm and 21 cm respectively
  - to be stitched 26 cm from the bottom edge of the hood on the centre back seam using a 28 mm box-tack
- have a 8 mm top-stitching at the face opening edge and bottom hem edge

10.9 Buttonholes

Six buttonholes shall:

- be positioned 15 mm from the left front edge
  - with the top buttonhole being 30 mm below the gorge seam
  - with the lowest being 50 mm above the hem
  - with the remaining four buttonholes equidistantly spaced between the top and the lowest buttonhole
- be of finished length 30 mm
- be horizontal
- be neatly made, gimped and barred

Two buttonholes shall:

- be positioned in the strap of the hood
  - first being 40 mm from the free edge
  - second being 11 cm from the free edge
  - of finished length 25 mm
  - neatly made, gimped and barred

Six buttonholes shall:

- be positioned 10 mm above the bottom edge on the hood
  - with the first buttonhole being 20 mm from each centre front
  - one buttonhole being 50 mm from the centre back seam on each side
  - with the remaining two buttonholes spaced equally between the centre front and centre back buttonholes
- be of finished length 25 mm
- be vertical
- be neatly made, gimped and barred

10.10 Buttons

Six buttons shall:

- be of 22 mm diameter
- be positioned 30 mm from the front edge

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- on the right front
- in corresponding positions to the buttonholes on the left

Two buttons shall:

- be of 20 mm diameter
- be positioned on the centre back seam on the hood
  - first button being 50 mm above the bottom hem edge
  - second button being 50 mm above the first button (centres)

Six buttons shall:

- be of 20 mm diameter
- be positioned 10 mm below the neck-to-collar seam on the body (garment)
  - in the corresponding position to that on the hood hem

Two buttons shall:

- be of 20 mm diameter
- be positioned in the shoulder area in corresponding position to that on the shoulder strap

10.11 Bottom hem

Hem shall:

- be of finished width 45 mm, forming a tunnel
- extend from the left inside facing edge to the right inside facing edge
- have an eyelet at each end of the tunnel hem (on the inside only)
  - positioned centrally 50 mm from the facing-to-lining seam
- have a draw-cord fitted through the tunnel and shall protrude 15 cm from each eyelet (before adjustment)
  - securely stitched at the centre back of the tunnel
- have a 8 mm top-stitching from the bottom edge

10.12 Loops

Loops shall:

- be of double folded outer material
- be of finished width 15 mm
- positioned at the inside of the hem
  - centrally positioned between the side seam and lining-to-facing seam
- be sewn-in with the hem
- be of a length to accomodate a 40 mm wide belt
- be bar-tacked at both ends

10.13 Hanger loops

Hanger loop shall:

- be of double folded outer material
- be of finished length and width 90 mm and 15 mm respectively
- be securely positioned 20 mm below the neck-to-collar seam at the centre back on the inside of the jacket

11. Stitches, seams and stitchings

Tenderer's comments

11.1 Stitches

Jacket sleeve seams, shoulder, side seams and sleeve insertion: safety stitch

Other stitches: single needle lock stitch

11.2 Seams

Seams to be at least 10 mm wide (unless otherwise stated)

Jacket sleeve, side seams, shoulders and sleeve insertion: seam type LSc - 2

Turn in and interlap the edges of two plies of material and seam with appropriate number of rows of stitches.

Other seams: seam type SSa

Superimpose two or more plies of material and seam with the appropriate number of rows of stitches positioned at the specific distance(s) from the aligned edges.

11.3 Stitchings

Jacket hem and hood face opening: stitching type EFb-1

Turned in the specified with at the edge of the ply of material, fold back the turned edge, and stitch the turned-in and folded portion with the appropriate number of rows of stitches.

11.4 Number of stitches

seaming: 40 ± 4 per 10 cm

buttonholes: 12 ± 1 per 1 cm

buttons: 16 ± 1 per button

12. Packing, care-labelling and marking

Tenderer's comments

12.1 Packing

The jackets shall be:

- delivered in a commercially dry condition
- so packed that they will not be damaged in transit or in storage
- neatly folded and individually packed in a plastics envelope of suitable size and shape
- unless otherwise specified in the order or contract, acceptably packed (in units of 10) for transportation in acceptable bulk containers that comply with the requirements of RSA-MIL-SPEC 296 "Corrugated board boxes for clothing"

Jackets:

- of the same size designation to be packed together in a bulk container (unless quantities ordered are such that packing together of the same size only is not justified).
- of different size designations may also be packed together to accommodate the last part of an order or contract

12.2 Care-labelling

- Each garment to have a woven or printed label that is permanently secured and that provides (in accordance with SANS 10011 "Care-labelling of textiles and clothing") correct and appropriate care instructions
- printed labels to comply with the requirements of SANS 1309 "Printed labels for textiles"
- all care-labels and their markings to be such that they outlast the garments.

12.3 Marking

12.3.1 Jackets

Each jacket to have, secured to the neck-to-collar seam at the centre back on the inside of the jacket, a woven fabric label that complies with the requirements of SANS 1309 "Printed labels for textiles", and provides the following information in legible and indelible block letters of height at least 3 mm:

- the manufacturer's name or trade mark or both
- the size designation
- the composition of the fabric, to comply with SANS 10235 "Fibre-content labelling of textiles and textile products"
- the National stock number
- the year of manufacture

12.3.2 Envelopes

Each envelope to be clearly marked with the following information:

- the designation, i.e "Cold weather jacket"
- the size designation
- the National stock number

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12.3.3 Containers

E ach bulk container to have a label securely attached to the outside visible when the containers are stacked and providing the following information:

- the manufacturer's name or trade mark or both
- the year of manufacture
- Overall dimensions
- the designation, i.e "Cold weather jacket"
- the quantity
- the National stock number

12.4 Additional marking

When so required by the South African Navy, jackets, envelopes or containers (or any combination of these) to bear information additional to that specified above.

13. Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this specification. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of a standard, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards may be obtained from Standards South Africa.

RSA-MIL-SPEC 296, *Corrugated board boxes for clothing.*

ATTCC method 20

CKS 129, *Colours for textiles.*

CKS 553, *Unproofed core-spun ducks.*

CKS 627, *Fusible interlinings.*

SANS 85(SABS SM 85), *Thickness of wool fabrics.*

SANS 346(SABS 346), *Woven worsted fabrics.*

SANS 1309(SABS 1309), *Printed labels for textiles.*

SABS 1362(SABS 1362), *Sewing threads.*

SANS 1822(SABS 1822), *Slide fasteners.*

SANS 1823(SABS 1823), *Touch and close fasteners.*

SANS 5385(SABS SM 385), *Mass per unit of conditioned knitted textiles.*

SANS 5275(SABS SM 275), *Wales and courses per unit length in knitted textile fabrics.*

SANS 10011(SABS 011), *Care-labelling of textiles and clothing.*

SANS 10235(SABS 0235), *Fibre-content labelling of textiles and textile products.*

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Annex A
(normative)

Special conditions of tender

General

A-1 Unless otherwise stated, the South African Bureau of Standards, shall be the inspecting authority.

A-2 Three pre-production sample jackets, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. Each one of these samples shall be accompanied by a trim chart containing a sample of each component material (as given in 7) and the relevant certificates. Three metres of the outer material fabric must also be submitted by the successful tenderer to make swatches for colour re-registration purposes. It shall be the duty of the manufacturer to give adequate notice to the inspecting authority of the availability of these samples.

A-3 Three embroidered national flags shall be supplied to the successful tenderer to be used for the three pre-production samples. The balance shall be supplied once the three pre-production samples have been approved, and on receipt of a written request.

A-4 The jackets shall be subject to inspection during the course of manufacture. The inspector shall, during normal working hours, be given all reasonable facilities for carrying out his duties and shall have the right of entry into the contractor's factory and the factory or works of any subcontractor where work on jackets supplied to this specification may be in progress.

A-5 The contractor shall inspect the finished jackets for compliance with the specification before submitting them to the inspecting authority for final inspection.

A-6 Before acceptance, the jackets shall have been inspected and tested by the inspecting authority and found to comply with the requirements of the specification.

A-7 Any applications for deviations from drawings or the specification, or any laid down process, treatment or procedures as set out in this specification, must be made to the SA Navy Office, Pretoria.

Documentation

One container of each consignment shall be marked "Documents" and shall, in addition to the jackets, contain the following:

1) The packing slip/delivery note;
2) where applicable, the certificate(s) of conformance; and
3) a copy of the invoice containing the following:
   i) the order number
   ii) the financial authority number
   iii) a full description of the consignment, i.e items, size(s), quantity, etc.