Industry & Facilities Division	Page: 1/4
	☐ Interim ☒ Final

INSPECTION REPORT Nr 09/2012

BV Job nr: EGY.11.01.06.40

PROJECT: ---	***Ref: --***
BV Client: EL SEWEDY CABLES	***P/o nr: --*** *(client to BV)*
Manufacturer: EL SEWEDY CABLES	***P/o nr: --*** *(client to Manufacturer)*
Inspection requested by: **EL SEWEDY CABLES**	

SUPPLY / SUBJECT OF INSPECTION	ITEM / TAG Nr	QTY
Type test for 150 mm2 Hard Drawn Copper	---	sample

DOCUMENTS OF REFERENCE : *See continuation sheet for additional documents:* ☐ *Yes* ☒ *No*

Title	Reference n°	Rev.	Approved by	Date
BS 7884	--	-	Client	--
Technical Data sheet	--	-	Client	--
Type test plan	--	-	Client	--

INSPECTIONS :

Inspection place & Date or Period:
ElSewedy Cables factory
(Egy-Tech)From 15 to 25-01-2012 .

Stage of inspection :
- ☐ Before manufacturing
- ☐ During manufacturing
- ☒ Final
- ☐ Packing

Kind of inspection:
- ☐ Pre-inspection meeting
- ☒ Witnessing tests
- ☒ Final inspection
- ☐ Document review
- ☐ Expediting & vendor assessment
- ☐ Packing

(for details see continuation sheet)

Stamping :
☒ No ☐ ☐

Results of inspection : ☒ Satisfactory ☐ Unsatisfactory

Non Conformities Reports (NCR): None.
o NCR's issued during reported period :

o List of outstanding NCR's :

Main Conclusions & Remarks: (for details see continuation sheet)

Tests completed with satisfactory results.

Next visit scheduled: **None.**

BUREAU VERITAS CAIRO(34) MIDDLE EAST REGION

INSPECTION REPORT Nr 09/2012

(continued)

BV Job nr: EGY.11.01.06.40

Description of the inspections carried out:

- Introduction: At the request of **El Sewedy Cables** , the undersigned surveyor to Bureau Veritas, acting within the Bureau Veritas General Conditions of Services, which governs such intervention, attended the premises of **El Sewedy Cables factory** to witness type test performed on the copper overhead Conductor as detailed here under:

Conductor Construction	150 mm2 Hard Drawn Copper
Type & Size	150 mm2 CU
No. of AL wires X wire diameter	19X 3.2 mm
Average Outer Diameter	16 mm
No. of layers	2 + central wire

- Applicable Documents & Status of Approval: None.
- Manufacturing progress status: Sample test is completely manufactured
- Details of inspection activities carried out with respect to scope of work.

  Surveillance with reference to TTP

1- Electrical resistance

Test procedure:
Measure the d.c. resistance of the conductor on a completed length of cable or at least 1 meter in length at room temperature and record the temperature at which the measurement is made. Measure the resistance and corrected to the 20°C by the factor,

Resistance shall not exceed 0.1208 OHM
Result: R=0.119 OHM
The test result is acceptable.

BUREAU VERITAS CAIRO(34) MIDDLE EAST REGION

2- Wrapping test

Eight turns shall be wrapped around a mandrel of diameter equal to the wire diameter at a speed not exceeding sixty turns per minute, six turns shall be unwrapped and again closely wrapped.
Requirements the wire shall not break
Result the test was acceptable

3-Mass per Length

The mass per unit length of the conductor shall not vary from its nominal value by more than (+/- 2)%
The actual mass per unit length=1394 Kg/Km
The specified value=1377 Kg/Km
The results are complying with the requirements BS 7884 annex D

4-Tensile

The breaking load of the specimen test cut from of the samples shall be determined by means of a suitable tensile testing machine.

Requirements: 376.33 N/mm2

Result:
Tensile strength

No	1	2	3	4	5	6	7	8	9
UTS N/mm2	433.43	431.01	424.16	432.15	432.27	429.28	439.27	418.13	410.3

10	11	12	13	14	15	16	17	18	19
431.6	422.2	419.23	433.5	429.9	433.3	433.5	430.1	432.21	433.77

The results are complying with the requirements BS 7884 annex D

5-Conductor construction:

Conductor consisting of a no. of acicular wire of 3 nominal diameters having a centre core wire surrounded by one or more layer of helically laid wires.
When the conductor consist of more one layer alternate layers are stranded in opposite directions.
Result: conductor construction is in line with requirements.

5.1-Wire diameter:

Mean of 2 micro-meter measurements taken at right angles to each other at any one cross-section of the wire.

BUREAU VERITAS CAIRO(34) MIDDLE EAST REGION

Result:

The Nominal diameter = 3.2 mm
Min diameter=3.168 Max diameter=3.232

Position	1st,	2nd,
Diameter (x-Direction) (mm)	3.22	3.21
Diameter (Y-Direction) (mm)	3.19	3.21

The results are complying with the requirements BS 7884 clause 4.2.2 table 1.

5.2-Core diameter:

The diameter shall be the average of two readings, rounded to two decimals of a millimetre, taken at right angles to each other at the same location.

Result:

The Nominal diameter = 16 mm

Position	1st,	2nd,
Diameter (x-Direction) (mm)	16.02	16
Diameter (Y-Direction) (mm)	16.01	16.02

- Results of Inspection:

  All tests have been performed with satisfactory results.

  Calibration certificates were checked and were found acceptable.

- Problems pending / Areas of Concern: None.

ANNEXES ☐ *Yes (Total number of pages: .....)* ☒ *No*

Inspected by:

Name: Mostafa Elsayed

Signature:

Date of issue: 26/01/2012.

Inspection centre: BV Cairo

BUREAU VERITAS MIDDLE EAST REGION CAIRO(34) BR. STAMP

Checked by:

Name: Akram Mortada

Signature:

Distribution: ☐ CLIENT ☒ MANUFACTURER ☐ ☐