

**Manufacturer:**  
Dubai Cables Company PVT Ltd

**Issue :** 3  
**Valid From :** 21/01/2014

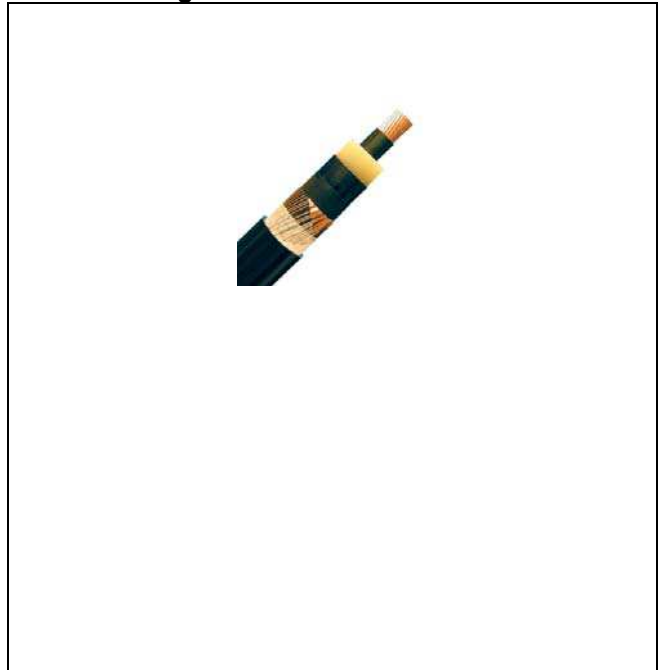
## Product Description

### FEEDER CABLES FOR AC ELECTRIFICATION

Cable 120MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/MDPE+GC  
Cable 120MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/MDPE+GC with anti theft thread  
Cable 120MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/LSZH for use in tunnels  
Cable 120MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/LSZH for use in tunnels with anti theft thread

Cable 400MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/MDPE+GC  
Cable 400MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/MDPE+GC with anti theft thread  
Cable 400MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/LSZH for use in tunnels  
Cable 400MM<sup>2</sup> 26/45KV CU C/W 83MM<sup>2</sup> CWS XLPE/LSZH for use in tunnels with anti theft thread

## Product Image



## Scope of Acceptance

### Full Acceptance

Subject to completion of satisfactory step voltage type test.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.  
Authorised by:

Cosmas Okoye  
Technology Introduction Coordinator

Richard Stainton  
Professional Head

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### Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section.

Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

#### Manufacturer

- 1) To supply cable in accordance with Network Rail specification NR/PS/ELP/00008
- 2) Step Voltage test to be completed in accordance with NR/PS/ELP/00008 Appendices A & D on the cables witnessed by an approved testing facility testing Engineer/NR representative.

#### User

- 1) LSZH cables are for use in tunnels only.

### Product Configuration

#### System or Complete Assembly

Part No.	Description	Catalogue No.
222-1016375	Cable 120MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XLPE/MDPE+GC	006/125160
222-1016379	Cable 120MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XLPE/MDPE+GC with anti theft thread	006/125161
222-1016387	Cable 120MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XLPE/ LSZH	006/125162
222-1016388	Cable 120MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XLPE/LSZH with anti theft thread	006/125163
222-1016376	Cable 400MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XLPE/MDPE+GC	006/125164
222-1016380	Cable 400MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XLPE/MDPE+GC with anti theft thread	006/125165
222-1016389	Cable 400MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XPE/LSZH	006/125166
222-1016382	Cable 400MM <sup>2</sup> 26/45KV CU C/W 83MM <sup>2</sup> CWS XLPE/LSZH with anti theft thread	006/125167

### Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
222 - 1016375	Cross sectional drawing of 120mm <sup>2</sup> XLPE cable		18/09/2012	1
222 - 1016379	Cross sectional drawing of 120mm <sup>2</sup> XLPE cable with anti theft thread		18/09/2012	
222 - 1016387	Cross sectional drawing of 120mm <sup>2</sup> XLPE/LSZH cable		18/09/2012	

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Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.
222 - 1016388	Cross sectional drawing of 120mm <sup>2</sup> XLPE/LSZH cable with anti theft thread		18/09/2013
222 - 1016376	Cross sectional drawing of 400mm <sup>2</sup> XLPE cable		18/09/2012
222 - 1016380	Cross sectional drawing of 400mm <sup>2</sup> XLPE cable with anti theft thread		18/09/2012
222 - 1016389	Cross sectional drawing of 400mm <sup>2</sup> XLPE/LSZH cable		18/09/2013
222 - 1016382	Cross sectional drawing of 400mm <sup>2</sup> XLPE/LSZH cable with anti theft thread		09/10/2013
D.REF : 222 - 1016378	400mm <sup>2</sup> cable technical data sheet with anti theft threaded copper tape		08/09/2012
PCR-144	BASEC certificate of conformity for Dubai cables quality management system		27/10/2011
CS1-144/003	BASEC certificate for design, manufacture and supply of Dubai cables up to 132kV	4	27/10/2012
ECS-043	BASEC certificate for environmental management system		Expired 21/01/2013
ECS-030	BASEC certificate for environmental management system – electric power cables and wires up to 132kV; PVC compounds		27/10/2011
ECS039/001	BASEC certificate for environmental management system – copper rods and wires	5	27/10/2011
ECS039/002	BASEC certificate for environmental management system – copper rods and wires	3	27/10/2011
ECS-039	BASEC certificate for environmental management system ISO 1400:2004		27/10/2011
CSI-144/001	BASEC certificate for environmental management system – electric power cables and wires up to 132kV; PVC compounds	7	27/10/2011
CSI-144/002	BASEC certificate for environmental management system – electric power cables and wires up to 3.3kV; copper rods and wires	6	27/10/2011
	9x BASEC certificates for Dubai cables		
	Clause by clause statement to NR/PS/ELP/00008		
	Ducab LSZH compliance statement		21/09/2013
DHV 5513003	Type test report on 400mm <sup>2</sup> 45kV XLPE insulated cable		02/05/2013
DU-TTR-07/13	DUCAB routine test report on 400mm <sup>2</sup> cable		27/01/13 to 27/02/13
DU-TTR-08/13	DUCAB sample test report for 400mm <sup>2</sup> cable		27/01/13 to 27/02/13
TDT 1657-10	Report of performance certificate of type tests on 400mm <sup>2</sup> cable to BS 6724 1997		15/02/2011
TDT 1376-10	Report of performance of type tests on 6.35/11Kv LSF 300mm <sup>2</sup> cable to IEC 60502-2:2005 and ST8 LSF sheaths to IEC 60502-1:2004		17/05/2010

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Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.
	Earth fault current rating calculations (metallic screen)		
	Polyethylene supercure LS4201R crosslinkable insulation compound data sheet	1	12/07/2010
	Borstar ME6052 LMDPE jacketing compound data sheet		15/03/2010
	Drum drawings		03/2013
	PolyOne ECCOH tm 5555 LSFOH LSZH Sheathing compound technical data sheet	5	04/2009
	DUCAB list of contracts		
TP 0832	AEI Thermoplastic HFFR Technical Data sheet		
	REFERENCE LIST OF SUPPLY OF CABLES (MAJOR PROJECTS)		
	Solvay Cogegum AFR/760 polyolefin HFFR Halogen free fire retardant compound		03/07/2012
TP 0831	Thermoplastic, low smoke, halogen free, flame retardant compound for cable insulation and sheathing		March 2012
	DUCAB company overview letter		26/03/2013
	DUCAB letter re testing facilities		28/05/2013
	Acheson product data sheet for graphite coating DAG T 144		16/04/2009
	DAG T 144 safety data sheet		
	Non Conductive Water blocking tape ZSD30		01/03/2012
	ZSD & BZSD safety data sheets		11/04/2013
	Ducab confirmation table of LSZH compounds		
	Photos of anti theft thread		
B3004497	CESI spike test report on 400mm <sup>2</sup> DUCAB cable		18/02/2013

### Certificate History

Issue	Date	Issue History
1	23/10/2013	First accepted for use
2	28/10/2013	Part no. for 400mm <sup>2</sup> LSZH cable amended
3	21/01/2014	Certificate amended to capture re-assigned catalogue numbers to all items.

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## Contact Details

### Manufacturer

Dubai Cables Company PVT Ltd  
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### Sponsor

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## General Terms & Conditions

### 1) General

- 1) This certificate can only be amended by Network Rail Technology Introduction Group. Any alterations made by a different person will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date.

### 2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Technology Introduction Group:
  - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
  - b. Of any intended change to the accepted product; changes include:
    - i. a change to the product configuration (to the actual product or its application);
    - ii. a variation to or addition of manufacturing locations or processes;
    - iii. a change in the name or ownership of the manufacturing company;
    - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Technology Introduction Group at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to the Network Rail Technology Introduction Group.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

### 3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Technology Introduction Group.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Technology Introduction Group.
- 4) Inform Network Rail Technology Introduction Group in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

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#### 4) Compliance

Railways and Other Guided Systems (ROGS) Regulations

1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations

2) As required in Railway Group Standard GE/RT8270, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

- a. All rail vehicle types that have access rights over the area affected by the change
- b. Infrastructure managed by others
- c. Neighbours.

Railway Interoperability Regulations

3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.

4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail Regulation) is required before the equipment is to be used in revenue earning service.

#### 5) Supply Chain Arrangements

1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.

2) Products may be purchased by Network Rail or its agents, suppliers or contractors.

3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers.