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	LOW VOLTAGE UNDERGROUND CABLES WITH RATED VOLTAGE $U_0/U(U_m)$ 0,6/1,0 (1,2) kV	GSC002 Rev. 05 Addendum Rev.01 13/06/2019

LV UNDERGROUND CABLES

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Revision	Data	List of modifications
00	04/04/2019	First emission
01	13/06/2019	Common list update

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1 SCOPE

This addendum of the Global Standard GSC002 rev. 5 specifies the requirements applicable to Enel Distribuição São Paulo (Brazil). They are specified in this document with reference to the same paragraph number of GSC002 rev. 5

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LOCAL SECTION D - ENEL DISTRIBUIÇÃO SÃO PAULO

ITEM	TITLE	DESCRIPTION
3.3	Local Standards	<p>ABNT NBR 6251, Cabos de potência com isolamento extrudada para tensões de 1 a 35kV – Requisitos construtivos</p> <p>ABNT NBR 7285, Cabos de potência com isolamento extrudada de polietileno termofixo (XLPE) para tensão de 0,6/1kV – sem cobertura – requisitos de desempenho</p> <p>ABNT NBR 11137, Carretel de madeira para acondicionamento de fios e cabos elétricos – dimensões e estruturas</p> <p>ABNT NBR NM 280, Condutores de cabos isolados (IEC 60228, MOD)</p>
8	CONDITIONS OF SUPPLY	<p>PACKAGING AND LABELING</p> <p>The conductor will be delivered by the manufacturer in wood or metal drum, which will not be returned, according to maximum and minimum dimensions shown in Table A and according to Figure N° 3.</p> <p>The total length of the driver given on each reel may not be less than requested in the purchase order and shall not exceed by more than $\pm 5\%$. The maximum gross weight of the reel is packed 2,200 kg.</p> <p>It should protect the ends of each cable reel with caps to prevent moisture ingress and must be internally secured to the spool ends, and must be mechanically protected against possible damages from the handling and transport of each reel , leaving both accessible through the use of internal helix or conch in each reel ends.</p> <p>When the distance between the source of manufacture and storage location of the purchaser involving only a means of transport and less than 200 km away ,the use of internal propeller only reels of conductors greater than or equal to 120 mm ² section is required ; this restriction does not release moisture protection of both visible ends of the conductor, mechanical protection and careful handling of the reels.</p> <p>The wooden spools will be treated according to international requirements for pest control , avoiding the compound " Pentachlorophenol " and " Creosote " . Treatment should include, at least : high toxicity to decay organisms , high penetration and holding power , chemical stability, non-corrosive to metals and substances affecting physical characteristics of the wood and weather protection</p> <p>Note: The purchase order could specify a maximum length of cable in drum.</p>




LOCAL SECTION D - ENEL DISTRIBUIÇÃO SÃO PAULO

ITEM	TITLE	DESCRIPTION															
8	CONDITIONS OF SUPPLY	<div data-bbox="576 573 1423 1043" data-label="Diagram"> </div> <p data-bbox="890 1077 1134 1106" style="text-align: center;">Figure N° 3 Trial type</p> <table border="1" data-bbox="780 1126 1369 1285" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>A⁽¹⁾</th> <th>B</th> <th>C ⁽¹⁾</th> <th>D⁽²⁾</th> <th>E</th> </tr> <tr> <th>mm</th> <th>mm</th> <th>mm</th> <th>mm</th> <th>mm</th> </tr> </thead> <tbody> <tr> <td>1730</td> <td>(3)</td> <td>1120</td> <td>80</td> <td>(4)</td> </tr> </tbody> </table> <p data-bbox="879 1301 1134 1330" style="text-align: center;">Table A Trial dimension</p> <p data-bbox="568 1357 639 1386">Notes:</p> <ul style="list-style-type: none"> <li data-bbox="568 1397 783 1426">(1) Maximum value. <li data-bbox="568 1438 775 1467">(2) Minimum value <li data-bbox="568 1478 1326 1547">(3) EI Double the minimum cable curvature radius for transportation, in accordance with Manufacturer specifications. <li data-bbox="568 1559 1342 1628">(4) 300 or 180 mm, in accordance with the type of spool (large or small, respectively) <p data-bbox="568 1688 743 1718">All spools must:</p> <ol style="list-style-type: none"> <li data-bbox="568 1729 1430 1843">1) Be protected by wooden staves on the exterior, which are to be secured to the wooden spools. An equivalent system is to be used on the metal spools. The staves are to be fastened by steel or plastic bands. <li data-bbox="568 1861 1445 1930">2) Show the correct direction for unwinding the spools, by means of an arrow located on the sides. 	A ⁽¹⁾	B	C ⁽¹⁾	D ⁽²⁾	E	mm	mm	mm	mm	mm	1730	(3)	1120	80	(4)
A ⁽¹⁾	B	C ⁽¹⁾	D ⁽²⁾	E													
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1730	(3)	1120	80	(4)													

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8	CONDITIONS OF SUPPLY	<p>3) Have a rustproof nameplate on each side of the spool. Each nameplate will show the following information (as a minimum), in the language of the country where the cable is to be used (Spanish or Portuguese).</p> <p>The following data will be required:</p> <ul style="list-style-type: none"> • Name of the Manufacturer • Country of origin of the batch • The words: "ENEL GROUP" • ENEL RIO/ENEL CEARÁ/ENEL GOIÁS/ENEL SÃO PAULO (according to purchase) • Purchase Order number • Maximum voltage between lines • Conductor Material and insulation type • Nominal cross-sectional area (mm²) • Number of the spool within the batch • Net weight and gross weight, in kg. • Length of the conductor, in meters. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center;">Country code</th> <th style="text-align: center;">Formation</th> <th style="text-align: center;">Spool max dimension</th> <th style="text-align: center;">Nominal length [m]</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">325016</td> <td style="text-align: center;">1x16</td> <td style="text-align: center;">Cable roll</td> <td style="text-align: center;">100</td> </tr> <tr> <td style="text-align: center;">325015</td> <td style="text-align: center;">1x35</td> <td style="text-align: center;">ABNT 11137 90/60</td> <td style="text-align: center;">1000</td> </tr> <tr> <td style="text-align: center;">325014</td> <td style="text-align: center;">1x95</td> <td style="text-align: center;">ABNT 11137 90/60</td> <td style="text-align: center;">600</td> </tr> <tr> <td style="text-align: center;">323864</td> <td style="text-align: center;">1x240</td> <td style="text-align: center;">ABNT 11137 100/60</td> <td style="text-align: center;">250</td> </tr> </tbody> </table>	Country code	Formation	Spool max dimension	Nominal length [m]	325016	1x16	Cable roll	100	325015	1x35	ABNT 11137 90/60	1000	325014	1x95	ABNT 11137 90/60	600	323864	1x240	ABNT 11137 100/60	250
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COMMON LIST OF MAIN REQUIREMENTS

GS Type Code	Distribution Company and Country	Country Code	Rated Voltage U ₀ /U [kV]	Cross-section [mm ²]	Type of Cable	Conductor material	Minimum Number of Wires of Conductor	Minimum conductor diameter [mm]	Maximum conductor diameter [mm]	Insulation Material	Insulation nominal thickness [mm]	Insulation minimum thickness [mm]	Sheath Material	Sheath nominal thickness [mm]	Sheath minimum thickness [mm]	Sheath Colour	Assembly	Neutral conductor
GSC002/002	SP-BRAZIL	325016	0.6/1.1	1x16	I	ALUMINUM	6	4,6	5,2	XLPE	0,7	0,53	PO	1,3	1,01	Black	Unipolar	-
GSC002/004	SP-BRAZIL	325015	0.6/1.0	1x35	I	ALUMINUM	6	6,6	7,5	XLPE	0,9	0,71	PO	1,3	1,01	Black	Unipolar	-
GSC002/007	SP-BRAZIL	325014	0.6/1.0	1X95	I	ALUMINUM	15	11	12	XLPE	1,1	0,89	PO	1,4	1,09	Black	Unipolar	-
GSC002/009	SP-BRAZIL	323864	0.6/1.0	1X240	I	ALUMINUM	30	17,6	19,2	XLPE	1,7	1,43	PO	1,5	1,175	Black	Unipolar	-