

TESTING CENTER OF CABLE PRODUCTS

Autogennaya str. 7, Kharkov, 61099, Ukraine,
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Accredited by:
National Accreditation Agency of Ukraine - A national accreditation body of Ukraine
Certificate of Accreditation № 20353 dated January 16, 2024; Valid until January 15, 2029

TEST REPORT

Report reference number 18
Tested by Andrew Konoplev, Alina Shurupova
Approved by Nikolay Zikov
Date of issue 30-Jan-26
Testing laboratory Testing center of cable products,
Address Autogennaya str. 7, Kharkov, 61099, Ukraine,
Phone: +38 057 754 52 75, E-mail: lab@yuzhcable.com.ua
Manufacturer YUZH CABLE WORKS, PJSC
Address Autogennaya str. 7, Kharkov, 61099, Ukraine
Standard TY Y 31.3-00214534-018-2003
Test procedure Tests
Cable type ABBГнр -LS 4×35
Trade mark YUZH CABLE
Rating(s) Uo/U 0,66/1,0
Dates of receipt of test item 19-Jan-26
Dates of performance of tests From 20-Jan-26 to 29-Jan-26
Summary of test results PASS

Ref No.	Tests	Prescribed	Observed				Verdict
1	Electrical tests						
			BU	BN	BK	GY	Pass
1.1	Resistance of conductors (Ω /km)	Max. 0,868	0,862	0,860	0,863	0,864	Pass
1.2	Volume resistivity of insulation at 20°C ($\Omega \cdot \text{cm}$)	Min. 10^{13}	9,44	9,32	9,08	8,95	Pass
	at 70°C ($\Omega \cdot \text{cm}$)	Min. 10^{10}	5,24	5,23	4,96	5,08	Pass
1.3	Voltage test 2,4 kV/4 h	No breakdown of the insulation	No breakdown of the insulation				Pass
2	Non-electrical tests						
2.1	Measurement of thickness of insulation - value (mm)	1,2 _{0,22}	1,28	1,28	1,26	1,27	Pass
2.2	Measurement of thickness of sheath - value (mm)	1,8	2,12				Pass

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Ref No.	Tests	Prescribed	Observed				Verdict
2.3	Mechanical properties of insulation						
	<i>Without ageing:</i>						
	Tensile strength (N/mm ²)	Min. 12,5	14,0	13,7	13,8	14,0	Pass
	Elongation-at-break (%)	Min. 150	280	290	275	285	Pass
	<i>After ageing in air oven:</i>						
	Duration (h) / Temperature (°C)	168 / (100±2)					
	Tensile strength (N/mm ²)	Min. 12,5	13,2	13,0	13,2	13,2	Pass
	Elongation-at-break (%)	Min. 150	260	266	261	268	Pass
	Tensile strength variation (%)	Max. ±25	-5,7	-4,8	-4,5	-5,9	Pass
	Elongation-at-break variation (%)	Max. ±25	-7,2	-8,2	-5,1	-6,0	Pass
2.3	<i>Pressure test at high temperature</i>						
	Duration (h) / Temperature (°C)	4 / (80±2)					
	Median of the depth of indentation (%)	Max. 50	27	26	26	26	Pass
2.3	<i>Heat shock test</i>						
	Duration (h) / Temperature (°C)	1 / (150±3) No cracks	No cracks	No cracks	No cracks	No cracks	Pass
2.4	Mechanical properties of sheath						
	<i>Without ageing:</i>						
	Tensile strength (N/mm ²)	Min. 12,5			14,5		Pass
	Elongation-at-break (%)	Min. 150			325		Pass
	<i>After ageing in air oven:</i>						
	Duration (h) / Temperature (°C)	168 / (100±2)					
	Tensile strength (N/mm ²)	Min. 12,5			13,3		Pass
	Elongation-at-break (%)	Min. 150			305		Pass
	Tensile strength variation (%)	Max. ±25			-8,0		Pass
	Elongation-at-break variation (%)	Max. ±25			-6,3		Pass
2.4	<i>Heat shock test</i>						
	Duration (h) / Temperature (°C)	1 / (150±3) No cracks			No cracks		Pass
2.4	<i>Pressure test at high temperature</i>						
	Duration (h) / Temperature (°C)	6 / (80±2)					
	Median of the depth of indentation (%)	Max. 50			29		Pass

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Ref No.	Tests	Prescribed	Observed				Verdict
2.5	Additional ageing test on pieces of completed cables	168 / (100±2)					
	Duration (h) / Temperature (°C)						
	<i>mechanical properties of insulation:</i>						
	Tensile strength variation (%)		Max. ±25	-9,7	-9,2	-8,6	
	Elongation-at-break variation (%)	Max. ±25	-5,7	-5,2	-4,9	-4,8	Pass
	<i>mechanical properties of sheath:</i>						
	Tensile strength variation (%)	Max. ±25	-6,0				Pass
	Elongation-at-break variation (%)	Max. ±25	-8,2				Pass
2.6	Vertical flame propagation						
	- time of application of flame s	120					
	- distance between the lower edge of the top support and the onset of charring mm	Min 50	369				Pass
	- distance between the lower edge of the top support and the charring extends downwards mm	Max 540	509				Pass

Nikolay Zykov,
 Head of TCCP

Andrew Konoplev,
 Head of the Laboratory of electrical tests

Alina Shurupova,
 Head of Laboratory of promising developments

