



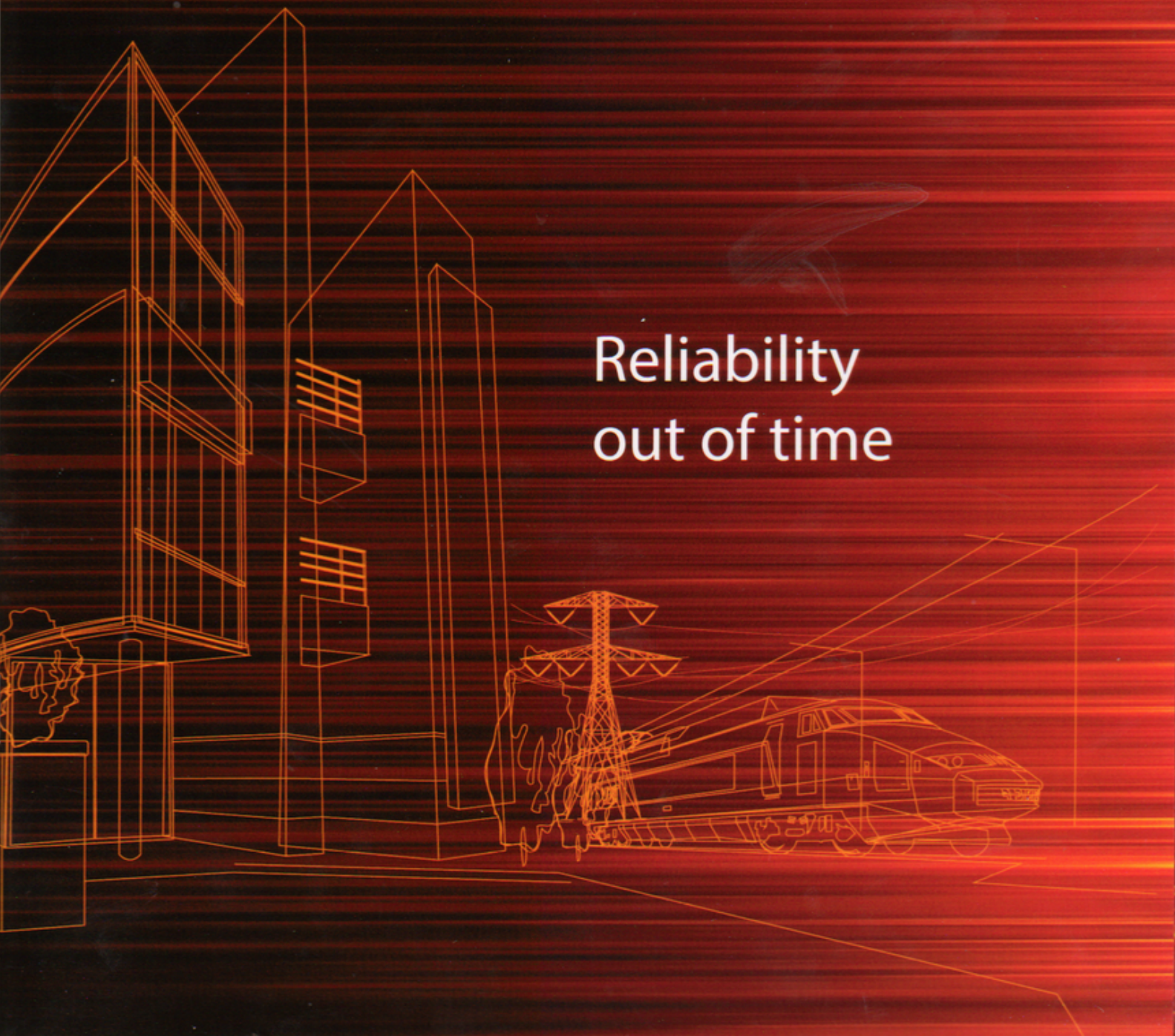
GOMELCABLE
JOINT STOCK COMPANY

55
1958-2013

Product Catalogue

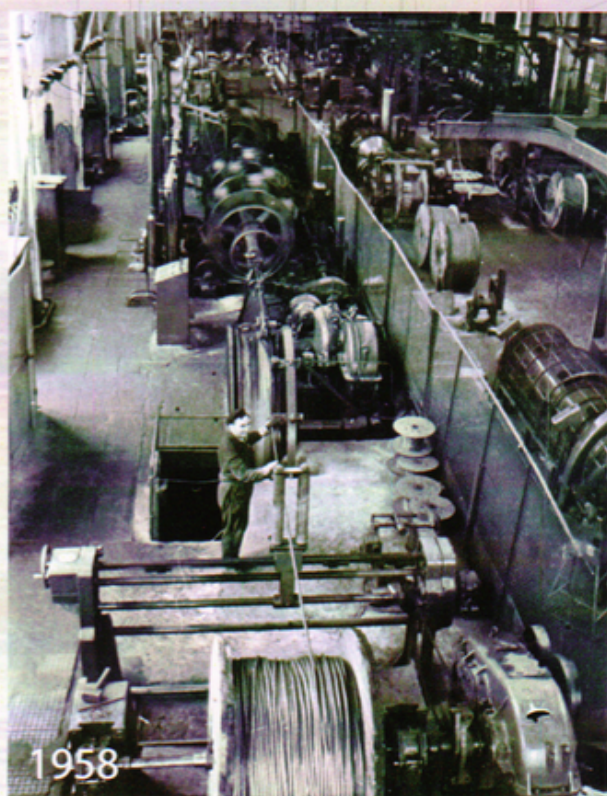
Production of round and rectangular
copper and aluminium winding wires

Reliability
out of time



2 ENTERPRISE HISTORY

«Gomelcable» aluminium and copper wires carry out and transform energy at the largest power stations of the Central and Eastern Europe, the aerial power lines of Belarus and neighboring countries also as electric motors of the technical equipment surrounding us consist of them.



In 1998 JSC «Gomelcable» became the Resident of Free Economic Zone «Gomel-Raton». It lowered tax loading and provided for the enterprise the favorable conditions for investment and business activity.

In 2004 JSC «Gomelcable» becomes the consolidated joint stock company «Gomelcable».

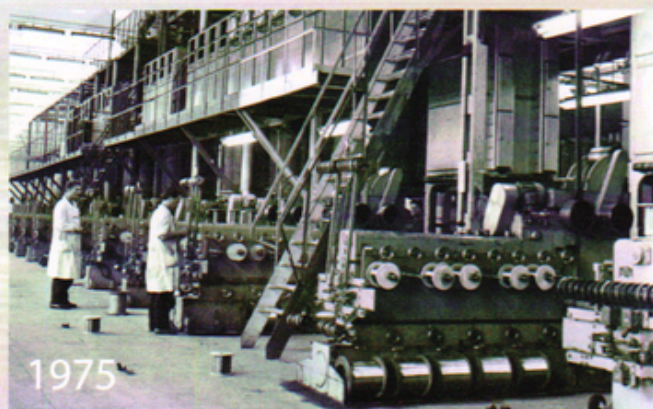
The quality standards of the new millennium demanded modernization of the equipment, lowering of the burden to the environment. So the enterprise began stage-by-stage technical re-equipment which is carried out since 1998 up to the present day.

History of JSC «Gomelcable» - one of leading enterprises of Belarus on manufacturing of wires production - began in 1958. According to Narkhozplan of general electrification of the Republic the decision about creation of the specialized plant for manufacturing of the bare wires for aerial power lines was taken.

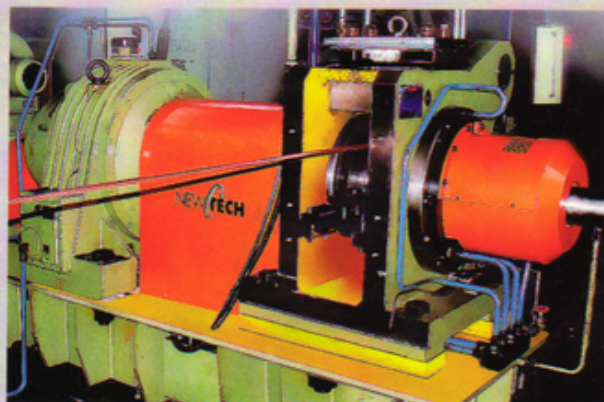
The name «Gomelcable» was appropriated to the plant by the order of Sovnarhoz of BSSR on **October 24, 1958**. So the 24th of October became the plant date of birth.

Industry development in 1960-1970 demanded manufacturing of the enameled wires and wires with paper and glass-fiber insulation. «Gomelcable» developed too - in 1961 construction of shop of the enameled and winding wires was finished.

In 1996 the plant was reorganized into joint stock company - JSC «Gomelcable».



In the terms of the technical re-equipment and modernization program for the period from 1998 up to 2012 the enterprise has bought 18 new high-capacity enameling machines by the companies «MAG» (Austria) and «NewTech» (Italy). The equipment provides output of the copper and aluminium wires of round and rectangular sections in enamel, glass-fibre, glass-polyester, paper insulation.



Due to the technical re-equipment «Gomelcable» considerably upgraded the nomenclature and a size range of the produced wires.

Quality of production is provided by the adjusted work of the high-qualified personnel, modern equipment, high-quality materials of the European and domestic production.

The JSC «Gomelcable» management system meets the requirements of the international standart *ISO 9001:2008*, scope of certification «*Design, development and manufacture of bare wires for aerial power lines and enameled winding wires*». The certificate was issued by «TÜT Thüringen e.V.» certification body for systems and personnel.



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PRODUCTION MODERNIZATION

CERTIFICATE

for the management system
according to ISO 9001:2008

The proof of the conforming application with the regulation was
furnished and in accordance with certification procedure it is certified
for the company



"Gomelcabel" JSC
151, Sovetskaya Str.
246007 Gomel
Republic of Belarus

Scope

Design, development and manufacture of bare wires for
aerial power lines and enameled winding wires

Certificate Registration No.: TIC 15 100 138471

Valid until: 2015-08-26

Audit Report No.: 3330 28AP ED

Initial certification: 2009

This certification was conducted in accordance with the TIC auditing and certification procedures and
is subject to regular surveillance audits


TUV Rheinland AG
Certification body for
systems and personnel



June, 2013-05-31



Certificate of Compliance

Certificate Number: 20080210-E210327
Report Reference: E210327, 2009 January 20
Issue Date: 2009 February 19

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Underwriters
Laboratories Inc.

Issued to: GOMELCABLE JSC
SOVETSKAYA STR 151
246007 GOMEL, BELARUS

This is to certify that
representative samples of COMPONENT - MAGNET WIRE
Models: PETD-200, PEE1 - E006A

Have been investigated by Underwriters Laboratories Inc. in
accordance with the Standards indicated on this Certificate.

Standard(s) for Safety: UL 1446 - Systems of Insulating Materials - General - Sixth Edition

Additional Information: See Addendum for Ratings

Only those products bearing the UL Recognized Component Mark should be
considered as being covered by UL's Recognition and Follow-Up Service.

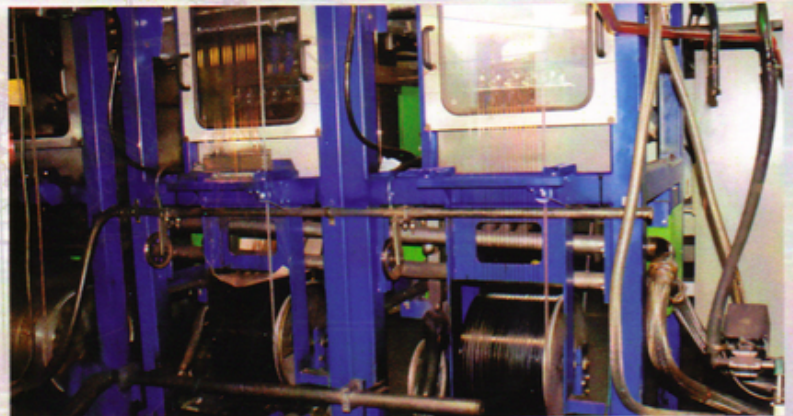
The UL Recognized Component Mark generally consists of the manufacturer's identification and
listing number, model number or other product designation as specified under "Marking" for the
particular Recognition as published in the appropriate UL Directory. As a supplementary means of
identifying products that have been produced under UL's Component Recognition Program, UL's
Recognized Component Mark may be used in conjunction with the required Recognition Mark.

The Recognized Component Mark is required when specified in the UL Directory pertaining the
recognition or under "Marking" for the individual component.

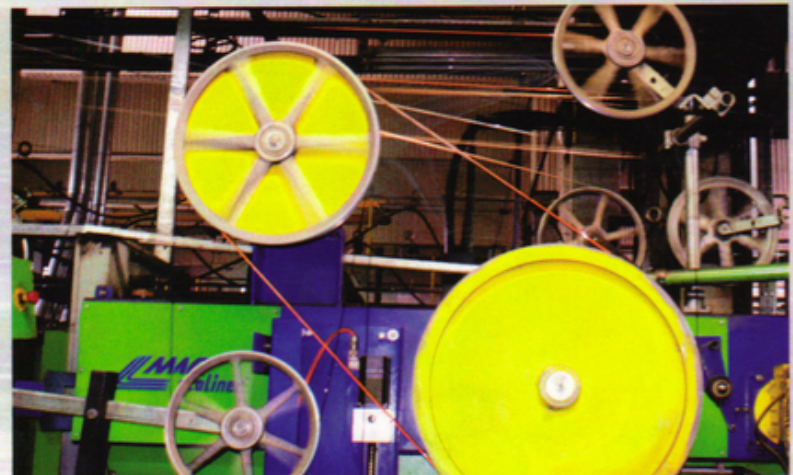
Look for the UL Recognized Component Mark on the product

Prepared by:
Mark Kucharski, Lead Engineering Associate
Underwriters Laboratories Inc.

Reviewed by:
A.J. Rupp, Senior Staff Engineer
Underwriters Laboratories Inc.



The enterprise buys the best electro-insulating
varnishes from Italian and French companies which
allow to manufacture wires with the improved technical
characteristics.



New enameling machines allow to produce the
enameled wires which meet the requirements imposed
to the products in the world market: with the enhanced
mechanical and electrical characteristics corresponding
to the requirements of the international **standard IEC 60317** and the **safety standard UL 1446**. Certification on
compliance to the **UL standard 1446** was carried out by
Underwriters Laboratory Inc. (NEMA).

*It guarantees the stable high level of production and products quality.
The JSC «Gomelcable» is ready to work for setting for production of
the new products with additional characteristics accordingly to the
demands of customers.*

The enterprise was repeatedly rewarded by the awards for the achieved quality level of production.



In 2007 the enterprise became the winner of the prize of the Ministry of Industry of Republic of Belarus for achievements in the area of quality. The enterprise was awarded with the third prize for achievements in the area of quality.



Creative team of JSC «Gomelcable» was awarded with the prize of the Ministry of Industry in the field of science and technique for 2009 for design and implementation of the **round copper wire with self-bonding layer** into production.

In the nomination «The goods for industrial purposes» of the contest «The Best Goods of the Republic of Belarus» enameled wires of JSC «Gomelcable» became the best goods of Republic of Belarus twice.

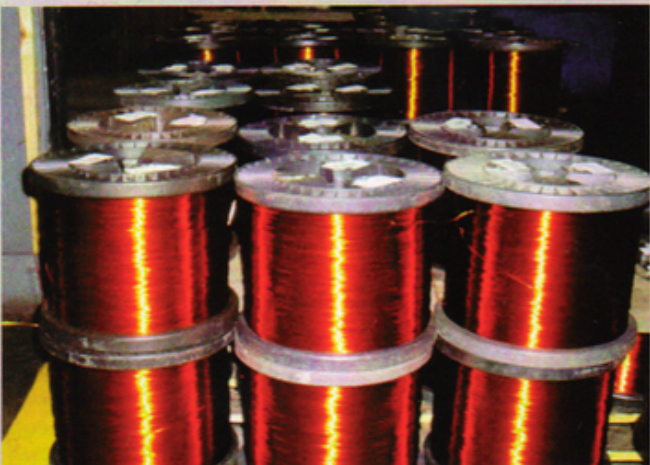
Continuous modernization, increasing of the production capacities, expansion of the product range made JSC «Gomelcable» the largest enterprise in its branch and led it on the leading positions at the market of enameled wires on the territories of the CIS.

We are interested in establishment of the strong business relations with the enterprises of all countries. We hope our cooperation will be long-term and mutually advantageous.

6 WINDING WIRES WITH ENAMEL INSULATION

Type, grade	Heat class	Norms and standards	Range of diameters, mm / section, mm ²	Type of insulation
Enameled copper round wires				
PEEI1-155 PEEI2-155	155(F)	TC BY 400052314.014-2006 IEC 60317-3	0,100-5,000	Polyesterimide
PEEI1-180 PEEI2-180 PEEI3-180	180(H)	TC BY 400052314.027-2009 IEC 60317-8	0,100-5,000	Polyesterimide
PETD1-200 PETD2-200	200(C)	TC BY 400052314.013-2005 IEC 60317-13	0,100-5,000	Polyesterimide +Polyamidimide
PEFD1-180-MEK PEFD2-180-MEK PEFD3-180-MEK	180(H)	TC BY 400052314.011-2003 IEC 60317-22	0,100-5,000	Polyesterimide +Polyamidimide
PEFD1-200 PEFD2-200 PEFD3-200	200(C)	TC BY 400052314.032-2010	0,100-5,000	Polyesterimide +Polyamidimide
PEEI1V-K 200 PEEI2V-K 200	200(C)	TC BY 400052314.026-2009 IEC 60317-38	0,250-0,800	Polyesterimide +Polyamidimide +polyamide
PEU1-155 PEU2-155	155(F)	IEC 317-20	0,100-5,000	Polyurethane
PEU1-180 PEU2-180	180(H)	IEC 317-51	0,100-5,000	Polyurethane
Enameled aluminium round wires				
PEEI1-130A	130(B)	TC BY 400052314.020-2006	0,200-5,000	Polyester
PEEI1-D 200 A PEEI2-D 200 A	200(C)	TC BY 400052314.021-2006 IEC 60317-25	0,200-5,000	Polyester +Polyamidimide
Enameled copper rectangular wires				
PEEIP1-155 PEEIP2-155	155(F)	TC BY 400052314.042-2012 IEC 60317-16	5-64 aspect ratio b & a: $1,4 \leq \frac{b}{a} < 8$	Polyesterimide
PEEIP1-180 PEEIP2-180	180(H)	TC BY 400052314.042-2012 IEC 60317-28		Polyesterimide
PEEIP1-D200 PEEIP2-D200	200(C)	TC BY 400052314.042-2012 IEC 60317-29		Polyesterimide +Polyamidimide
Enameled aluminium rectangular wires				
PEEIP1-155A PEEIP2-155A	155(F)	TC BY 400052314.041-2012	8-64 aspect ratio b & a: $1,4 \leq \frac{b}{a} < 8$	Polyester
PEEIP1-180A PEEIP2-180A	180(H)	TC BY 400052314.041-2012		Polyester
PEEIP1-D 200A PEEIP2-D 200A	200(C)	TC BY 400052314.041-2012		Polyester +Polyamidimide

Thermoplasticity	Heat shock	Properties and applications
260°C	175°C	Designed for manufacturing of the windings in electric machines, apparatus and devices
300°C	200°C	
330°C	220°C	
300°C	200°C	Intended for application in the devices working with refrigerants in mixture with coolant oils
335°C	220°C	
320°C	220°C	With self-bonding layer
200°C	180°C	Tinned. Designed for winding of the transformers.
230°C	200°C	
175°C	200°C	Designed for manufacturing of the windings in electric machines, apparatus and devices
320°C	220°C	
-	175°C	Designed for manufacturing of the windings in electric machines
-	200°C	
-	220°C	
-	175°C	Designed for manufacturing of the windings in electric machines
-	200°C	
-	220°C	



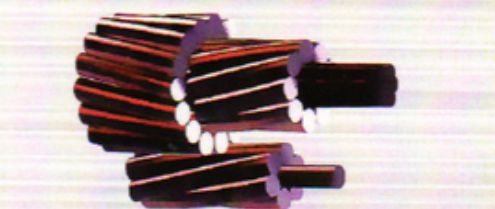
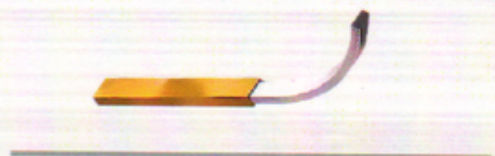
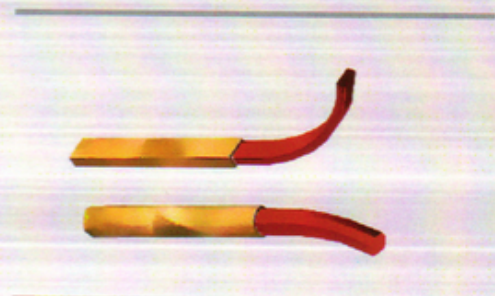
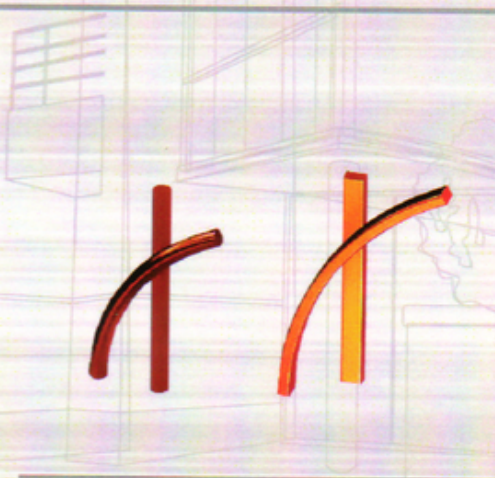
On customer's request other types of enameled wires with another technical characteristics can be manufactured.



Type of packing:

- for round wires – conical and cylindrical spools, wooden reel №8, metallic drum №7;
- for rectangular wires – conical spools, cylindrical spools (except K 125), wooden reel №8, metallic drum №7.

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ELECTROTECHNICAL WIRE, WIRES
IN PAPER INSULATION, BARE WIRES

Type	Norms and standards
Copper electrotechnical round wire	
MT	TC BY 400052314.040-2012
MM	TC BY 400052314.040-2012
Copper electrotechnical rectangular wire	
PMT	GOST 434-78
PMM	GOST 434-78
Aluminium electrotechnical round wire	
AT	TC BY 400052314.038-2012
AM	TC BY 400052314.038-2012
Aluminium electrotechnical rectangular wire	
PAT	TC BY 400052314.039-2012
PAM	TC BY 400052314.039-2012
Winding round wires with copper core in paper insulation	
PMB round Insulation 1,2, 1,92, 4,08	TC BY 400052314.018-2006
Winding rectangular wires with copper core in paper insulation	
PMB rectangular	TC BY 400052314.018-2006
Winding rectangular wires with aluminium core in paper insulation	
PAB rectangular	TC BY 400052314.018-2006
Aluminium and steel-aluminium bare wires for aerial power lines	
A	GOST 839-80
AS	GOST 839-80
TPZh A – current-conduct aluminium core	TC BY 400052314.033-2010
TPZh AS – current-conduct steel-aluminium core	TC BY 400052314.033-2010
TPZh F A – current-conduct aluminium profile core	TC BY 400052314.033-2010

Range of diameters, mm / sections, mm ²	Properties and applications	Type of packing
0,100-7,000	Industrial application	coils, spools
0,100-8,000		
5,0-35,0	Industrial application	coils
5,0-150,0		coils, reels №7, №8
0,600-8,000	Industrial application	coils
0,600-8,000		coils, reels №7, №8, spools
10,0-75,0	Industrial application	coils
5,0-150,0		coils, reels №7, №8
2,5-4,0	Used for winding of the electrical machines and apparatus	wooden reel №8, metal drum №7
10,0-35,0	Used for winding of the electrical machines and apparatus	wooden reel №8, metal drum №7
10,0-75,0	Used for winding of the electrical machines and apparatus	wooden reel №8, metal drum №7
16,0-240,0	Intended for energy transmission through aerial power lines. Steel core with section 19-48 mm ² , twisted steel bare wires number - 7,0, twisted steel bare wires Ø 1,85-2,8 mm. Twisted aluminium bare wires number 6-30, twisted aluminium bare wires Ø 1,85-4,0 mm	wooden reels №14, 16, 16a, 18a
16,0/2,7 - 300,0/48,0		
16,0-120,0		
25,0-95,0		
25,0-120,0		

10 WINDING WIRES WITH GLASS-FIBRE OR GLASS-POLYESTER DOUBLE INSULATION

Used in compound of windings of electrical devices, should be impregnated with heat-resisting varnishes of the appropriate class accordingly to normative documentation.
Heat-resistant class for the wires impregnated with silicone varnish - C (200°C), for other wires - H (180°C).

Allowable minimum ambient temperature during operation -60°C.

TC BY 400052314.036-2011.

Type of glass-fibre insulation	Impregnation, patching	Varnish layer	Copper wire type	Aluminium wire type
Glass	With heat-resisting varnish	Insulated with heat-resisting enamel	PETSD	-
		Thinned, insulated with heat-resisting high-strength enamel	PETVSD PETVSDT*	-
		Surface varnish layer	PSD-L PSDT-L*	APSD-L APSDT-L*
		absent	PSDT*	APSD APSDT*
	With silicone varnish	Surface varnish layer	PSDK-L PSDKT-L*	APSDK-L APSDKT-L*
		absent	PSDKT*	APSDK APSDKT*
Glass-polyester	absent	Insulated with heat-resisting enamel	PETSLD	-
		Insulated with heat-resisting high-strength enamel	PETVSLD	-
		absent	PSLD PSLDT*	APSLD APSLDT*
	With silicone varnish	absent	PSLDK PSLDKT*	APSLDK APSLDKT*

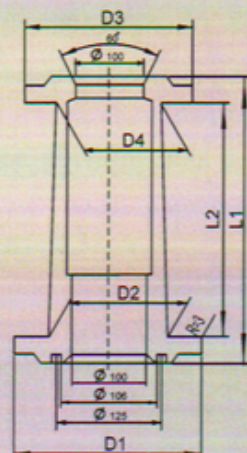
Type of packing:

- metal drum № 7, wooden reel № 8,
cylindrical spool K 500.

*- with thinned insulation

Conical spools

Type	Dimensions of the spools						Range of round wire diameters, mm	Average weight of wire per packing unit, kg	
	D1	D2	D3	L1	L2	L3		Copper wire	Aluminium wire
250/400	250	236	160	140	400	335	0,250-3,150	35	12
315/500	315	300	200	180	500	425	0,250-3,150	75	25
400/630	400	375	250	224	630	530	0,250-3,150	160	50

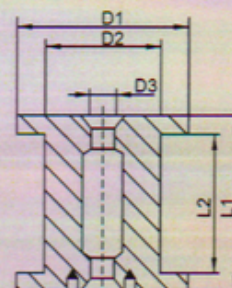
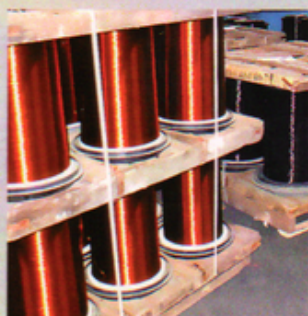


Cylindrical spools

Type	Dimensions of the spools					Range of round wire diameters, mm	Range of rectangular wire cross-sections, mm ²	Average weight of wire per packing unit, kg	
	D1	D2	D3	L1	L2			Copper wire	Aluminium wire
K 125	125	80	16	125	100	0,1-0,2	-	2,5	-
K 250	250	160	36	200	160	0,1-4,5	5-64	17	5,5
K 355	355	224	36	200	160	2,0-5,0	5-64	20	-
K 500	500	315	36	250	180	2,0-5,0	5-64	80	30

Drums for winding wires

7 M (3)	700	400	-	275	220-230	2,5-5,0	5-64	140	50
Wooden reel №8	800	450	50	306	230	2,5-5,0	5-64	250	90



Wooden reels for bare wires

Type	Dimensions of the reels					Average weight of wire per packing unit, kg	
	D1	D2	D3	L1	L2	A	AC
14	1400	750	70	826	710	1000	1100
16	1600	1200	70	716	600	1 700	2100
16a	1600	800	80	916	800	1 800	2200
18a	1800	900	80	1060	900	2000	2700





GOMELCABLE
JOINT STOCK COMPANY



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