ROSSKAT

CABLE FOR ESP

AO “ROSSKAT” was founded on the 21st of August, 1991. The plant is located in Neftegorsk – administrative centre of Neftegorsk district, Samara region.

Key concepts of the plant operation are as follows:

- release of quality products approved by certificates of GOST R;

- creation of long-term and trust relations with clients and partners of the plant.

At present AO “ROSSKAT” is a stable and rapidly developed plant operating at the market of copper wire rod and cabling-and-wiring products manufacturers in the Russian Federation and CIS countries. One of the latest significant achievements of the company is a victory at regional and federal stages of All-Russian competition “100 Best Products of Russia” in the “Products of production-and-technical purpose” category.

Production of the company provides complete manufacturing cycle: from copper processing into wire rod to production of cabling-and-wiring products. Each product passes quality control at all stages of manufacturing cycle. For products manufacturing, the plant uses advanced production complex manufactured by leading international manufacturers: “Rosendahl”, “Techocable”, “Caballe”, “Niehoff”, “Troester”, “Southwire”, “H.Folke Sandelin AB (HFSAB)”, “Maerz”.

Assortment of products offered by the plant is as follows:

- Copper wire rod;
- Copper wire;
- Profile for commutator machines;
- Non-insulated wires;
- Contact wires;
- Flexible non-insulated wires;
- Winding wires;
- Cables for electric submersible pump assemblies;
- Power cables for fixed installation, rated voltage up to 1 kV inclusive;
- Power cables for fixed installation, rated voltage of 6 kV;
- Flexible power cables with rubber insulation, rated voltage of 380/660 V and 220 V;
- Mine cables, rated voltage up to 1140 V;
- Building wires for rated voltage of 450/750 V;
- Wires for rolling stock up to 4 kV;
- Flexible wire for grounding.

All products produced by AO “ROSSKAT” are marked with “ROSSKAT”.

While choosing AO “ROSSKAT”, you obtain a reliable partner whose reputation is approved by long-term professional experience at the market of cabling-and-wiring products and cooperation with the largest enterprises of Russia and CIS countries.

ФЕДЕРАЛЬНОЕ АГЕНТСТВО ПО ТЕХНИЧЕСКОМУ РЕГУЛИРОВАНИЮ И МЕТРОЛОГИИ

Система добровольной сертификации систем менеджмента
«Регистр систем менеджмента»

ОРГАН ПО СЕРТИФИКАЦИИ СИСТЕМ МЕНЕДЖМЕНТА
ООО «САМАРСКИЙ ЦИС»
РФ, 443029, г. Самара, ул. Шверника, 15
№ RA.RU.13ФК81

№ 07745

СЕРТИФИКАТ СООТВЕТСТВИЯ

Выпуск 4. СМК сертифицирована с октября 2006г.

Выдан Акционерному обществу «РОССКАТ»
(АО «РОССКАТ»)

РФ, 446600, Самарская обл., Нефтегорский район,
примерно в 2,5 км по направлению на северо-восток от г. Нефтегорска

НАСТОЯЩИЙ СЕРТИФИКАТ УДОСТОВЕРЯЕТ:

система менеджмента качества применительно к проектированию, разработке, производству, поставке профилей медных; проволоки и катанки медной; катанки легированной; проводов неизолированных для воздушных линий электропередач; проводов неизолированных контактных; проводов неизолированных гибких; кабелей силовых для стационарной прокладки (кабели силовые с пластмассовой изоляцией); кабелей силовых для нестационарной прокладки (кабели шахтные, кабели для погружных нефтяных электронасосов, кабели силовые гибкие общего назначения, кабели высоковольтные для экскаваторов, горнодобывающих и других передвижных машин и механизмов); проводов силовых (провода силовые для электрических установок, провода осветительные, провода силовые общего назначения, провода и кабели для подвижного состава транспорта); кабелей контрольных; кабелей и проводов монтажных; кабелей судовых и морских грузонесущих; проводов обмоточных.

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ
ГОСТ ISO 9001-2011 (ISO 9001:2008)
(Приложение, конкретизирующее область сертификации СМК, является неотъемлемой частью сертификата)

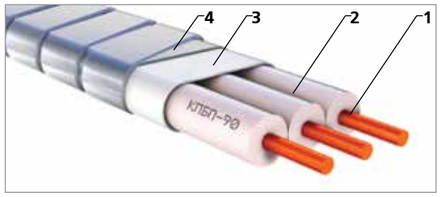
Регистрационный № РОСС RU.ФК81.И00057
Дата регистрации 19.10.2016 Срок действия до 15.09.2018

Руководитель Органа по сертификации систем менеджмента — В.В. Петренко
Председатель комиссии — И.А. Разборов
М.П.

Учетный номер № 06663

Accounting number of Quality systems Register No. 06663

KPBP-90, KPBK-90, KPBkP-90, KPBkK-90



STRUCRURE:

1- Copper single-wire core
2- Two-layer insulation of high density polyethylene
3- Bedding made of non-woven tape
4- Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

• Polyethylene cable for electrical submersible pumps, purposed for electric power supply to electric motors of oil production units with voltage 3.3 kV.

• Cable is used in wells with low-temperature pumped fluid and small content of aggressive substances. The highest temperature of core heating is 90°C.

DESIGN:

Cable is produced in a flat and round variant with steel galvanized or non-corrosive tape armor.

TECHNICAL CHARACTERISTICS:

Cable mark U_H= 3,3 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark U_H= 3,3 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPBP-90 KPBkP-90	10	13,6x32,0	KPBK-90 KPBkK-90	10	24,7
	13,3	14,3x34,1		13,3	26,2
	16	14,7x35,3		16	27,1
	21,15	15,4x37,4		21,15	28,6
	25	15,8x38,6		25	29,4
	35	16,9x41,9		35	31,8
	50	17,9x44,9		50	34,0

CALCULATED MASS OF CABLES:

Cable mark U_H= 3,3 kV	Number of conductors and nominal section of conductors, mm²						
	3x10	3x13,3	3x16	3x21,15	3x25	3x35	3x50
KPBP-90	861	1009	1097	1281	1416	1751	2108
KPBkP-90	811	951	1038	1218	1351	1681	2033
KPBK-90	778	918	1004	1185	1318	1644	1995
KPBkK-90	734	871	956	1134	1264	1586	1933

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C								
		20	30	40	50	60	70	80	85	90
KPBP-90, KPBkP-90	10	89	82	75	67	58	47	35	24	0
	13,3	105	97	89	79	69	56	42	28	0
	16	118	109	99	89	77	63	47	31	0
	21,15	140	130	118	106	92	75	56	37	0
	25	155	144	131	117	102	83	62	42	0
	35	191	177	161	144	125	102	71	51	0
	50	230	213	194	174	151	123	87	61	0
KPBK-90, KPBkK-90	10	88	81	74	66	58	47	35	24	0
	13,3	104	96	88	78	68	55	42	28	0
	16	116	108	98	88	76	62	47	31	0
	21,15	139	128	117	105	91	74	56	37	0
	25	153	142	130	116	100	82	62	41	0
	35	189	175	159	143	123	101	71	50	0
	50	227	210	192	172	149	121	86	61	0

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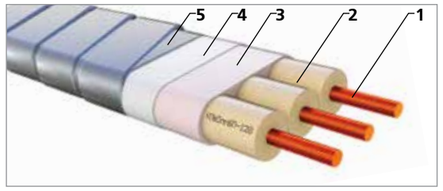
KPvOppBP-120, KPvOppBkP-120



STRUCRURE:

1. Copper single wire electric conductor
2. Two layer insulation of high density radiation-modified polyethylene
3. Common jacket of propylene block copolymer
4. Bedding of bonded fabric tape
5. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with two layer insulation of radiation-modified polyethylene, and propylene block polymer for submersible electric pump units proposed for electric power supply to electric motors of oil production units with nominal alternating voltage 3,3, 4 and 5 kV.
- Common jacket of propylene block polymer is laid with filling interface space. This cable mark has higher use reliability due to high resistance to mechanical effects.
- Cable is used in wells with average temperature of pumped fluid and average content of hazardous substances. Maximum temperature of conductors heating 120 °C.

DESIGN:

The cable is produced flat and round with steel galvanized or non-corrosive tape armor.

TECHNICAL CHARACTERISTICS:

Cable mark U_H= 3,3 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark U_H= 4 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark U_H= 5 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPvOppVP-120 KPvOppVkP-120	3x10	14,4x31,3	KPvOppBP-120 KPvOppBkP-120	3x10	14,8x32,5	KPvOppBP-120 KPvOppBkP-120	3x10	15,2x33,7
	3x13,3	15,1x3,4		3x13,3	15,5x34,6		3x13,3	15,9x35,8
	3x 16	15,5x34,6		3x 16	15,9x35,8		3x 16	16,3x37,0
	3x 21,15	16,2x36,7		3x 21,15	16,6x37,9		3x 21,15	17,0x39,1
	3x 25	16,6x37,9		3x 25	17,0x39,1		3x 25	17,4x40,3
	3x 35	17,7x41,2		3x 35	18,1x42,4		3x 35	18,5x43,6

CALCULATED MASS OF CABLES

U_H, kV	Cable mark	Number of conductors and nominal section, mm²					
		3x10	3x13,3	3x16	3x21,15	3x25	3x35
		Calculated mass 1 km cable, kg					
3,3	KPvOppVP-120	882	1038	1128	1318	1458	1803
	KPvOppVkP-120	821	969	1058	1244	1382	1721
4	KPvOppBP-120	920	1076	1166	1358	1499	1846
	KPvOppBkP-120	868	1016	1105	1293	1432	1774
5	KPvOppBP-120	960	1114	1206	1399	1544	1890
	KPvOppBkP-120	902	1053	1143	1332	1475	1816

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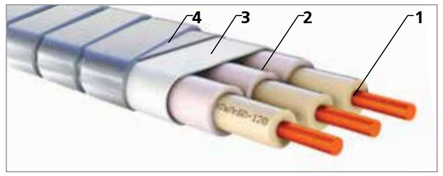
LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Uн, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C											
			20	30	40	50	60	70	80	90	100	110	115	120
KPvOppBP-120, KPvOppBkP-120	3,3	10	96	91	86	81	75	68	61	53	43	30	22	0
		13,3	115	109	103	96	89	81	72	63	51	36	26	0
		16	128	122	115	107	99	91	81	70	57	41	29	0
		21,15	155	147	139	130	120	110	98	85	69	49	35	0
		25	171	162	153	143	133	121	108	94	77	54	38	0
		35	206	195	184	172	160	146	130	113	92	65	46	0
	4	10	97	92	87	81	75	69	62	53	44	31	22	0
		13,3	116	110	103	97	90	82	73	63	52	37	26	0
		16	129	123	116	108	100	91	82	71	58	41	29	0
		21,15	156	148	140	131	121	111	99	86	70	49	35	0
		25	172	164	154	144	134	122	109	94	77	55	39	0
		35	207	197	186	174	161	147	131	114	93	66	46	0
	5	10	98	93	88	82	76	69	62	54	44	31	22	0
		13,3	117	111	104	98	90	82	74	64	52	37	26	0
		16	130	124	116	109	101	92	82	71	58	41	29	0
		21,15	157	149	141	132	122	111	100	86	70	50	35	0
		25	174	165	155	145	134	123	110	95	78	55	39	0
		35	209	198	187	175	162	148	132	114	93	66	47	0

FOR COMMENTS:

KPvPpBP-120, KPvPpBK-120, KPvPpBкP-120, KPvPpBкK-120



STRUCTURE:

1. Copper single wire electric conductor
2. Two layer insulation: first slot of high density radiation-modified polyethylene, second layer of propylene block copolymer
3. Bedding of bonded fabric tape
4. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with mixed insulation of radiation-modified polyethylene and propylene block polymer for submersible for submersible electric pump units proposed for electric power supply to electric motors of oil production units with nominal alternating voltage 3,3, 4 and 5 kV.
- This cable is used in wells with average temperature of pumped fluid and average content of hazardous substances. Maximum temperature of conductors heating is 120 °C.

DESIGN:

The cable is produced flat and round with steel galvanized or non-corrosive tape armor.

TECHNICAL CHARACTERISTICS:

Cable mark Uн= 3,3 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 4 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 5 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPvPpBP-120 KPvPpBkP-120	3 x 10	13,6 x 32,0	KPvPpBP-120 KPvPpBkP-120	3 x 10	14,0 x 33,2	KPvPpBP-120 KPvPpBkP-120	3 x 10	14,4 x 34,4
	3 x 13,3	14,1 x 33,5		3 x 13,3	14,5 x 34,7		3 x 13,3	14,9 x 35,9
	3 x 16	14,5 x 34,7		3 x 16	14,9 x 35,9		3 x 16	15,3 x 37,1
	3 x 21,15	15,2 x 36,8		3 x 21,15	15,6 x 38,0		3 x 21,15	16,0 x 39,2
	3 x 25	15,6 x 38,0		3 x 25	16,0 x 39,2		3 x 25	16,4 x 40,4
	3 x 35	16,7 x 41,3		3 x 35	17,1 x 42,5		3 x 35	17,5 x 43,7
	3 x 50	17,7x 44,3		3 x 50	18,1 x 45,5			
KPvPpBK-120 KPvPpBkK-120	3 x 10	24,7	KPvPpBK-120 KPvPpBkK-120	3 x 10	25,6	KPvPpBK-120 KPvPpBkK-120	3 x 10	26,4
	3 x 13,3	25,8		3 x 13,3	26,6		3 x 13,3	27,5
	3 x 16	26,6		3 x 16	27,5		3 x 16	28,4
	3 x 21,15	28,1		3 x 21,15	29,0		3 x 21,15	29,9
	3 x 25	29,0		3 x 25	29,9		3 x 25	30,7
	3 x 35	31,4		3 x 35	32,2		3 x 35	33,1
	3 x 50	33,5		3 x 50	34,4		3 x 50	35,3

CALCULATED MASS OF CABLES:

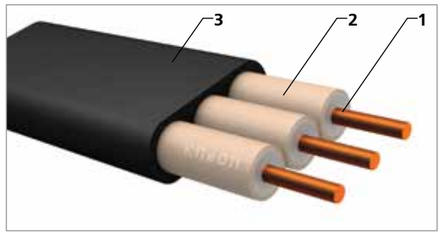
Uн, kV	Cable mark	Number of conductors and nominal section, mm²						
		3x10	3x13,3	3x16	3x21,15	3x25	3x35	3x50
3,3	KPvPpBP-120	856	986	1073	1256	1391	1724	2080
	KPvPpBkP-120	805	930	1015	1194	1327	1655	2006
	KPvPpBK-120	772	896	982	1162	1294	1618	1967
	KPvPpBkK-120	729	850	935	1111	1241	1561	1906
4	KPvPpBP-120	889	1020	1108	1292	1428	1763	2120
	KPvPpBkP-120	836	962	1048	1228	1362	1692	2044
	KPvPpBK-120	803	928	1014	1195	1328	1654	2006
	KPvPpBkK-120	758	880	965	1143	1274	1596	1943
5	KPvPpBP-120	925	1054	1143	1328	1467	1801	-
	KPvPpBkP-120	867	993	1081	1262	1399	1728	-
	KPvPpBK-120	834	959	1047	1228	1362	1690	2043
	KPvPpBkK-120	787	910	996	1174	1306	1630	1979

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	U_H, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C											
			20	30	40	50	60	70	80	90	100	110	115	120
KPvPpBP-120, KPvPpBkP-120	3,3	10	102	96	91	85	79	72	64	56	45	32	23	0
		13,3	119	113	107	100	92	84	75	65	53	38	27	0
		16	134	127	120	112	104	95	85	73	60	42	30	0
		21,15	160	151	143	133	124	113	101	87	71	50	36	0
		25	177	168	158	148	137	125	112	97	79	56	40	0
		35	218	206	195	182	169	154	138	119	97	69	49	0
		50	262	249	234	219	203	185	166	144	117	83	59	0
KPvPpBK-120, KPvPpBkK-120		10	101	95	90	84	78	71	64	55	45	32	22	0
		13,3	118	112	105	99	91	83	75	65	53	37	26	0
		16	132	126	118	111	102	94	84	72	59	42	30	0
		21,15	158	149	141	132	122	111	100	86	70	50	35	0
		25	175	166	156	146	135	124	110	96	78	55	39	0
		35	215	204	192	180	166	152	136	118	96	68	48	0
		50	258	245	231	216	200	183	163	142	116	82	58	0
KPvPpBP-120, KPvPpBkP-120	4,0	10	103	97	92	86	80	73	65	56	46	32	23	0
		13,3	120	114	108	101	93	85	76	66	54	38	27	0
		16	135	128	121	113	105	96	85	74	60	43	30	0
		21,15	161	153	144	135	125	114	102	88	72	51	36	0
		25	178	169	160	149	138	126	113	98	80	56	40	0
		35	219	208	196	183	170	155	139	120	98	69	49	0
		50	264	250	236	221	204	187	167	145	118	83	59	0
KPvPpBK-120, KPvPpBkK-120		10	102	96	91	85	79	72	64	56	45	32	23	0
		13,3	119	113	106	100	92	84	75	65	53	38	27	0
		16	134	127	120	112	104	94	85	73	60	42	30	0
		21,15	159	151	142	133	123	112	101	87	71	50	36	0
		25	176	167	158	147	137	125	111	97	79	56	39	0
		35	216	205	193	181	168	153	137	118	97	68	48	0
		50	260	247	233	218	202	184	165	143	116	82	58	0
KPvPpBP-120, KPvPpBkP-120	5,0	10	104	98	93	87	80	73	66	57	46	33	23	0
		13,3	122	115	109	102	94	86	77	67	54	38	27	0
		16	136	129	122	114	106	96	86	75	61	43	31	0
		21,15	162	154	145	136	126	115	103	89	73	51	36	0
		25	180	171	161	150	139	127	114	99	80	57	40	0
		35	221	210	198	185	171	156	140	121	99	70	49	0
KPvPpBK-120, KPvPpBkK-120		10	103	97	92	86	79	73	65	56	46	32	23	0
		13,3	120	114	107	101	93	85	76	66	54	38	27	0
		16	135	128	121	113	104	95	85	74	60	43	30	0
		21,15	160	152	143	134	124	113	101	88	72	51	36	0
		25	178	168	159	149	138	126	112	97	79	56	40	0
		35	218	207	195	182	169	154	138	119	97	69	49	0
		50	262	249	235	219	203	185	166	144	117	83	59	0

FOR COMMENTS:

KPvOP-120



STRUCTURE:

1. Copper electric conductor;
2. Two-layer insulation of radiation- modified high density polyethylene;
3. Protective common jacket.

SCOPE OF APPLICATION:

- Protective common jacket is laid with filling interphase space that makes cable resistant to outer crushing mechanical effects. Absence of armor sheath reduces cable mass and its dimensional specifications.
- This cable is used in wells with average temperature of pumped fluid and high content of acids, alkalis and other hazardous substances

TECHNICAL CHARACTERISTICS:

Cable mark U_H= 3,3 kV	Number and section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark U_H= 4 kV	Number and section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPvOP-120	3 x 10	13,3x30,2	KPvOP-120	3 x 10	13,7x31,4
	3 x 13,3	14,0x32,3		3 x 13,3	14,4x33,5
	3 x 16	14,4x33,5		3 x 16	14,8x34,7
	3 x 21,15	15,1x35,6		3 x 21,15	15,5x36,8
	3 x 25	15,5x36,8		3 x 25	15,9x38,0
	3 x 35	16,6x40,1		3 x 35	17,0x41,3

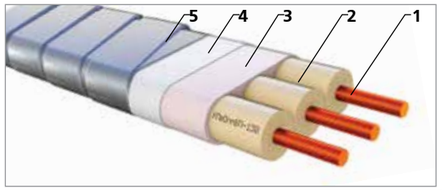
CALCULATED MASS OF CABLES

U_H, kV	Cable mark	Calculated mass 1 km of cable, kg					
		3x10	3x13,3	3x16	3x21,15	3x25	3x35
3,3	KPvOP-120	510	633	713	879	1002	1308
4	KPvOP-120	532	657	738	905	1029	1338

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	U_H, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C											
			20	30	40	50	60	70	80	90	100	110	115	120
KPvOP-120	3,3	10	94	89	84	79	73	66	59	52	42	30	21	0
		13,3	111	105	99	93	86	78	70	61	50	35	25	0
		16	124	118	111	104	96	88	79	68	56	39	28	0
		21,15	148	140	132	124	114	104	93	81	66	47	33	0
		25	164	155	146	137	127	116	103	90	73	52	37	0
		35	200	190	179	168	155	142	127	110	90	63	45	0
KPvOP-120	4,0	10	95	90	85	80	74	67	60	52	43	30	21	0
		13,3	112	106	100	94	87	79	71	61	50	35	25	0
		16	125	119	112	105	97	89	79	69	56	40	28	0
		21,15	149	141	133	125	115	105	94	82	67	47	33	0
		25	165	156	148	138	128	117	104	90	74	52	37	0
		35	202	192	181	169	156	143	128	111	90	64	45	0

KPvOppBP-130, KPvOppBkP-130



STRUCTURE:

1. Copper single wire electric conductor
2. Two layer insulation of high density radiation-modified polyethylene
3. Common jacket of propylene block copolymer with ethylene
4. Bedding of bonded fabric tape
5. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with two layer insulation of radiation-modified polyethylene, with common jacket of propylene block copolymer with ethylene for submersible electric pump units, proposed for electric power supply to electric motors of oil production units with nominal alternating voltage 3,3, 4 and 5 kV.
- Common jacket of propylene block copolymer with ethylene is laid with filling interphase space. This cable mark has higher use reliability due to high resistance to mechanical effects.
- Cable is used in wells with average temperature of pumped fluid and average content of hazardous substances. Maximum temperature of conductors heating 130 °C.

DESIGN:

The cable is produced flat with steel galvanized or non-corrosive tape armor.

TECHNICAL CHARACTERISTICS:

Cable mark Uн= 3,3 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 4 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 5 kV	Dimensional specification of cable, mm, not much than	Dimensional specification of cable, mm, not much than
KPvOppBP-130 KPVOppBkP-130	3 x 10	14,4x31,3	KPvOppBP-130 KPVOppBkP-130	3 x 10	14,8x32,5	KPvOppBP-130 KPVOppBkP-130	3 x 10	15,2x33,7
	3 x 13,3	15,1x33,4		3 x 13,3	15,5x34,6		3 x 13,3	15,9x35,8
	3 x 16	15,5x34,6		3 x 16	15,9x35,8		3 x 16	16,3x37,0
	3 x 21,15	16,2x36,7		3 x 21,15	16,6x37,9		3 x 21,15	17,0x39,1
	3 x 25	16,6x37,9		3 x 25	17,0x39,1		3 x 25	17,4x40,3
	3 x 35	17,7x41,2		3 x 35	18,1x42,4		3 x 35	18,5x43,6

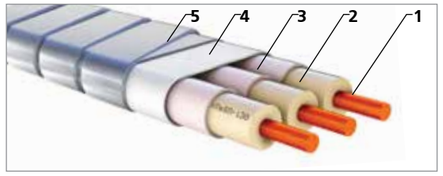
РАСЧЕТНАЯ МАССА:

Uн, kV	Cable mark	Number of conductors and nominal section, mm² 3x10	3x13,3	3x16	3x21,15	3x25	3x35
3,3	KPvOppBP-130	882	1038	1128	1318	1458	1803
	KPVOppBkP-130	821	969	1058	1244	1382	1721
4	KPvOppBP-130	920	1076	1166	1358	1499	1846
	KPVOppBkP-130	868	1016	1105	1293	1432	1774
5	KPvOppBP-130	960	1114	1206	1399	1544	1890
	KPVOppBkP-130	902	1053	1143	1332	1475	1816

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Uн, kV	Section TPZH mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C 20	30	40	50	60	70	80	90	100	110	120	125	130
KPvOppBP-130 KPVOppBkP-130	3,3	10	100	95	90	85	80	74	67	60	52	44	30	21	0
		13,3	119	113	107	101	95	88	80	71	62	52	36	25	0
		16	133	126	120	113	106	98	89	80	69	58	40	28	0
		21,15	161	153	145	137	128	119	108	97	84	70	48	34	0
		25	177	169	160	151	141	131	119	107	92	77	53	38	0
		35	213	203	193	182	170	157	144	129	111	95	64	45	0
KPvOppBP-130 KPVOppBkP-130	4	10	101	96	91	86	80	74	68	61	53	44	30	21	0
		13,3	120	114	108	102	95	88	81	72	62	52	36	25	0
		16	134	127	121	114	107	99	90	81	70	58	40	28	0
		21,15	162	154	146	138	129	119	109	98	84	70	49	34	0
		25	178	170	161	152	142	132	120	108	93	77	54	38	0
		35	215	205	194	183	171	158	145	129	112	95	65	46	0
KPvOppBP-130 KPVOppBkP-130	5	10	102	97	92	87	81	75	69	61	53	44	31	22	0
		13,3	121	115	109	103	96	89	81	73	63	52	36	26	0
		16	135	128	122	115	107	99	91	81	70	58	41	29	0
		21,15	163	155	147	139	130	120	110	98	85	70	49	35	0
		25	179	171	162	153	143	133	121	108	94	77	54	38	0
		35	216	206	195	184	172	159	146	130	113	95	65	46	0

KPvBP-130, KPvBkP-130, KPvBK-130, KPvBкK-130K



STRUCTURE:

1. Copper electric conductor
2. First layer insulation of high density radiation-modified polyethylene
3. Second layer insulation high density radiation-modified polyethylene in black color
4. Bedding of bonded fabric tape
5. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with insulation of high density radiation-modified polyethylene for submersible electric pump units, proposed for electric power supply to electric motors of oil production units with nominal voltage 3,3 kV.
- This cable is used in wells with average temperature of pumped fluid and average content of hazardous substances. Maximum temperature of conductors heating is 130°C.

DESIGN:

The cable is produced flat and round with steel galvanized or non-corrosive tape armor.

TECHNICAL CHARACTERISTICS:

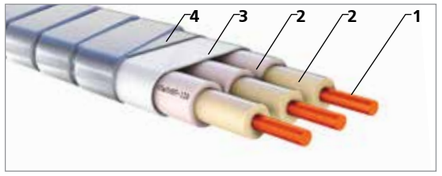
Cable mark Uн= 3,3 kV	Section of conductors, mm²	Calculated mass 1 km of cable, kg	External size of the cable, mm, not much than	Cable mark Uн= 3,3 kV	Section of conductors, mm²	Calculated mass 1 km of cable, kg	External size of the cable, mm, not much than
KPvBP-130, KPvBkP-130	10	872	13,6x32,8	KPvBK-130, KPvBkK-130	10	792	24,1
	13,3	988	14,3x34,3		13,3	922	25,1
	16	1089	14,7x35,5		16	1015	25,9
	21,15	1270	15,4x37,6		21,15	1198	27,3
	25	1400	15,9x39,0		25	1334	28,2
	35	1672	16,8x41,8		35	1631	30,1

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Section TPZH, mm²	Сечение ТПЖ, мм²	Long-term allowable current load of cable I, A, at ambient temperature, °C 50	60	70	80	90	100	110	120	130
KPvBP-130, KPvBkP-130	3,3	10	88	83	77	70	63	54	44	31	0
		13,3	104	98	90	83	74	64	52	37	0
		16	117	110	102	93	83	72	59	41	0
		21,15	140	131	121	111	99	86	70	49	0
		25	155	145	135	123	110	95	78	55	0
		35	190	178	165	150	135	116	95	67	0
KPvBK-130, KPvBkK-130	3,3	10	88	82	76	69	62	54	44	31	0
		13,3	104	97	90	82	73	63	52	37	0
		16	116	109	101	92	82	71	58	41	0
		21,15	138	129	120	109	98	85	69	49	0
		25	154	144	133	122	109	94	77	54	0
		35	188	176	163	149	133	115	94	67	0

FOR COMMENTS:

KPvPpBP-130, KPvPpBK-130, KPvPpBkP-130, KPvPpBkK-130



STRUCTURE:

1. Copper single wire electric conductor;
2. Two layer insulation: first slot of high density radiation-modified polyethylene, second layer of propylene block copolymer with ethylene;
3. Bedding of bonded fabric tape;
4. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with mixed insulation of radiation-modified polyethylene and propylene block polymer with ethylene for submersible electric pump units, purposed for electric power supply to electric motors of oil production units with nominal alternating voltage 3,3, 4 and 5 kV.
- This cable is used in wells with average temperature of pumped fluid and average content of hazardous substances. Maximum temperature of conductors heating is 130 °C.

DESIGN:

The cable is produced flat and round with steel galvanized or non-corrosive tape armor.

TECHNICAL CHARACTERISTICS:

Cable mark U_H= 3,3 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark U_H= 4 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark U_H= 5 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPvPpBK-130 KPvPpBkP-130	3 x 10	13,6 x 32,0	KPvPpBP-130 KPvPpBkP-130	3 x 10	14,0 x 33,2	KPvPpBP-130 KPvPpBkP-130	3 x 10	14,4 x 34,4
	3 x 13,3	14,1 x 33,5		3 x 13,3	14,5 x 34,7		3 x 13,3	14,9 x 35,9
	3 x 16	14,5 x 34,7		3 x 16	14,9 x 35,9		3 x 16	15,3 x 37,1
	3 x 21,15	15,2 x 36,8		3 x 21,15	15,6 x 38,0		3 x 21,15	16,0 x 39,2
	3 x 25	15,6 x 38,0		3 x 25	16,0 x 39,2		3 x 25	16,4 x 40,4
	3 x 35	16,7 x 41,3		3 x 35	17,1 x 42,5		3 x 35	17,5 x 43,7
	3 x 50	17,7x 44,3		3 x 50	18,1 x 45,5			
KPvPpBK-130 KPvPpBkK-130	3 x 10	24,7	KPvPpBP-130 KPvPpBkK-130	3 x 10	25,6	KPvPpBK-130 KPvPpBkK-130	3 x 10	26,4
	3 x 13,3	25,8		3 x 13,3	26,6		3 x 13,3	27,5
	3 x 16	26,6		3 x 16	27,5		3 x 16	28,4
	3 x 21,15	28,1		3 x 21,15	29,0		3 x 21,15	29,9
	3 x 25	29,0		3 x 25	29,9		3 x 25	30,7
	3 x 35	31,4		3 x 35	32,2		3 x 35	33,1
	3 x 50	33,5		3 x 50	34,4		3 x 50	35,3

CALCULATED MASS OF CABLES

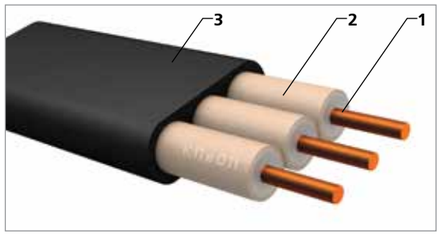
U_H, kV	Cable mark	Number of conductors and nominal section, mm²						
		3x10	3x13,3	3x16	3x21,15	3x25	3x35	3x50
3,3	KPvPpBP-130	856	986	1073	1256	1391	1724	2080
	KPvPpBkP-130	805	930	1015	1194	1327	1655	2006
	KPvPpBK-130	772	896	982	1162	1294	1618	1967
	KvPpBkK-130	729	850	935	1111	1241	1561	1906
4	KPvPpBP-130	889	1020	1108	1292	1428	1763	2120
	KPvPpBkP-130	836	962	1048	1228	1362	1692	2044
	KPvPpBK-130	803	928	1014	1195	1328	1654	2006
	KvPpBkK-130	758	880	965	1143	1274	1596	1943
5	KPvPpBP-130	925	1054	1143	1328	1467	1801	-
	KPvPpBkP-130	867	993	1081	1262	1399	1728	-
	KPvPpBK-130	834	959	1047	1228	1362	1690	2043
	KvPpBkK-130	787	910	996	1174	1306	1630	1979

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	U_H, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C												
			20	30	40	50	60	70	80	90	100	110	120	125	130
KPvPpBP-130, KPvPpBkP-130	3,3	10	104	99	94	89	83	77	70	63	54	44	31	22	0
		13,3	122	116	110	104	97	90	82	74	64	52	37	26	0
		16	137	131	124	117	109	101	93	83	72	58	41	29	0
		21,15	164	156	148	139	130	121	110	99	85	70	49	35	0
		25	181	173	164	155	145	134	122	109	95	77	55	39	0
		35	223	213	202	190	178	165	151	135	117	95	67	48	0
		50	269	257	243	229	215	199	181	162	141	115	81	57	0
KPvPpBK-130, KPvPpBkK-130		10	104	99	94	89	83	77	70	63	54	44	31	22	0
		13,3	122	116	110	104	97	90	82	74	64	52	37	26	0
		16	137	130	124	117	109	101	92	83	71	58	41	29	0
		21,15	163	155	147	139	130	120	110	98	85	70	49	35	0
		25	181	172	163	154	144	133	122	109	94	77	54	39	0
		35	222	212	201	189	177	164	150	134	116	95	67	47	0
		50	267	255	242	228	213	197	180	161	140	114	81	57	0
KPvPpBP-130, KPvPpBkP-130	4,0	10	105	100	95	90	84	78	71	63	55	45	32	22	0
		13,3	123	118	112	105	98	91	83	74	64	53	37	26	0
		16	139	132	125	118	111	102	93	84	72	59	42	30	0
		21,15	165	157	149	141	132	122	111	100	86	70	50	35	0
		25	183	174	166	156	146	135	123	110	96	78	55	39	0
		35	225	215	204	192	180	166	152	136	118	96	68	48	0
		50	271	258	245	231	216	200	183	163	142	116	82	58	0
KPvPpBK-130, KPvPpBkK-130		10	105	100	95	90	84	78	71	63	55	45	32	22	0
		13,3	123	117	111	105	98	91	83	74	64	52	37	26	0
		16	138	132	125	118	110	102	93	83	72	59	42	29	0
		21,15	164	157	149	140	131	121	111	99	86	70	50	35	0
		25	182	174	165	155	145	135	123	110	95	78	55	39	0
		35	224	213	202	191	178	165	151	135	117	95	67	48	0
		50	269	257	244	230	215	199	182	162	141	115	81	57	0
KPvPpBP-130, KPvPpBkP-130	5,0	10	106	101	96	91	85	79	72	64	56	45	32	23	0
		13,3	125	119	113	106	99	92	84	75	65	53	38	27	0
		16	140	133	127	119	112	103	94	84	73	60	42	30	0
		21,15	167	159	151	142	133	123	112	100	87	71	50	36	0
		25	185	176	167	157	147	136	124	111	96	79	56	39	0
		35	227	216	205	193	181	168	153	137	118	97	68	48	0
KPvPpBK-130, KPvPpBkK-130		10	106	101	96	90	85	78	72	64	55	45	32	23	0
		13,3	124	118	112	106	99	92	84	75	65	53	37	26	0
		16	140	133	126	119	111	103	94	84	73	59	42	30	0
		21,15	166	158	150	142	132	123	112	100	87	71	50	35	0
		25	184	175	166	157	146	136	124	111	96	78	55	39	0
		35	225	215	204	192	180	167	152	136	118	96	68	48	0
		50	271	259	245	231	216	200	183	164	142	116	82	58	0

FOR COMMENTS:

KPvOP-130



STRUCTURE:

1. Copper electric conductor;
2. Two layer insulation of high density radiation-modified polyethylene;
3. Protective common jacket.

SCOPE OF APPLICATION:

- Protective common jacket is laid with filling interphase space that makes cable resistant to outer crushing mechanical effects. Absence of armor sheath reduces cable mass and its dimensional specifications.
- This cable is used in wells with average temperature of pumped fluid and high content of acids, alkalis and other hazardous substances.

TECHNICAL CHARACTERISTICS:

Cable mark Uн= 3,3 kV	Number and section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 4 kV	Number and section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPvOP-130	3 x 10	13,3x30,2	KPvOP-130	3 x 10	13,7x31,4
	3 x 13,3	14,0x32,3		3 x 13,3	14,4x33,5
	3 x 16	14,4x33,5		3 x 16	14,8x34,7
	3 x 21,15	15,1x35,6		3 x 21,15	15,5x36,8
	3 x 25	15,5x36,8		3 x 25	15,9x38,0
	3 x 35	16,6x40,1		3 x 35	17,0x41,3

CALCULATED MASS OF CABLES

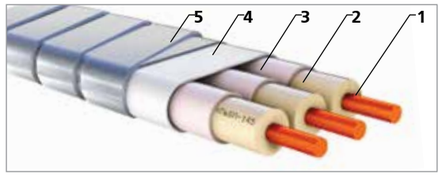
Uн, kV	Cable mark	Number of conductors and nominal section, mm²					
		3x10	3x13,3	3x16	3x21,15	3x25	3x35
3,3	КПвОП-130	510	633	713	879	1002	1308
4	КПвОП-130	532	657	738	905	1029	1338

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Uн, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C											
			20	30	40	50	60	70	80	90	100	110	115	120
KPvOP-130	3,3	10	94	89	84	79	73	66	59	52	42	30	21	0
		13,3	111	105	99	93	86	78	70	61	50	35	25	0
		16	124	118	111	104	96	88	79	68	56	39	28	0
		21,15	148	140	132	124	114	104	93	81	66	47	33	0
		25	164	155	146	137	127	116	103	90	73	52	37	0
		35	200	190	179	168	155	142	127	110	90	63	45	0
KPvOP-130	4,0	10	95	90	85	80	74	67	60	52	43	30	21	0
		13,3	112	106	100	94	87	79	71	61	50	35	25	0
		16	125	119	112	105	97	89	79	69	56	40	28	0
		21,15	149	141	133	125	115	105	94	82	67	47	33	0
		25	165	156	148	138	128	117	104	90	74	52	37	0
		35	202	192	181	169	156	143	128	111	90	64	45	0

CABLES FOR OIL-SUBMERSIBLE PUMPS

KPvBP-145, KPvBкP-145, KPvBK-145, KPvBкK-145



STRUCTURE:

1. Copper electric conductor;
2. Two layer insulation of high density radiation-modified polyethylene;
3. Bedding of bonded fabric tape;
4. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with insulation of high density radiation-modified polyethylene for submersible electric pump units purposed for electric power supply to electric motors of oil production units with nominal alternating voltage 3,3, 4 and 5 kV.
- The cable is produced flat and round with steel galvanized or non-corrosive tape armor.
- This cable is used in wells with average temperature of pumped fluid and average content of acids, alkalis, and other hazardous substances. Maximum temperature of conductors heating is 145 °C.

TECHNICAL CHARACTERISTICS:

Cable mark Uн= 3,3 kV	Number and section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 4 kV	Number and section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 5 kV	Number and section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPvBP-145 KPvBkP-145	10	13,6x32,6	KPvBP-145 KPvBkP-145	10	14,2x33,8	KPvBP-145 KPvBkP-145	10	14,6x35,0
	13,3	14,3x34,1		13,3	14,7x35,3		13,3	15,1x6,5
	16	14,7x35,3		16	15,1x6,5		16	15,5x37,7
	21,15	15,4x37,4		21,15	15,8x38,6		21,15	16,2x39,8
	25	15,8x38,6		25	16,2x39,8		25	16,6x41,0
	35	16,9x41,9		35	17,3x43,1		35	17,7x44,3
	50	17,9x44,9						
KPvBK-145 KPvBkK-145	10	25,1	KPvBK-145 KPvBkK-145	10	26,0	KPvBK-145 KPvBkK-145	10	26,8
	13,3	26,2		13,3	27,1		13,3	27,9
	16	27,1		16	27,9		16	28,8
	21,15	28,6		21,15	29,4		21,15	30,3
	25	29,4		25	30,3		25	31,2
	35	31,8		35	32,7		35	33,5
	50	34,0		50	34,8		50	35,7

CALCULATED MASS OF CABLES

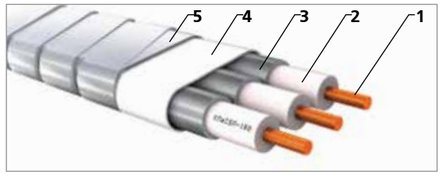
Uн, kV	Cable mark	Number of conductors and nominal section, mm²						
		3x10	3x13,3	3x16	3x21,15	3x25	3x35	3x50
3,3	KPvBP-145	877	1005	1101	1282	1413	1752	2106
	KPvBkP-145	826	948	1041	1220	1348	1682	2031
	KPvBK-145	794	914	1008	1187	1315	1645	1993
	KPvBkK-145	749	868	959	1135	1262	1587	1931
4	KPvBP-145	914	1039	1136	1319	1451	1791	-
	KPvBkP-145	858	980	1074	1254	1384	1719	-
	KPvBK-145	824	946	1041	1221	1350	1681	2031
	KPvBkK-145	778	897	991	1168	1295	1622	1968
5	KPvBP-145	949	1075	1172	1356	1492	1832	-
	KPvBkP-145	890	1013	1109	1289	1423	1758	-
	KPvBK-145	856	980	1075	1255	1385	1719	2074
	KPvBkK-145	808	930	1023	1200	1329	1658	2008

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Uн, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C													
			20	30	40	50	60	70	80	90	100	110	120	130	140	145
KPvBP-145 KPvBkP-145	3,3	10	110	106	101	96	91	85	80	73	66	58	49	38	22	0
		13,3	129	124	119	113	107	100	93	86	78	68	58	45	26	0
		16	145	139	133	127	120	113	105	96	87	77	65	50	29	0
		21,15	173	166	159	151	143	134	125	115	104	92	77	60	35	0
		25	192	184	176	167	158	149	138	127	115	102	86	66	38	0
		35	236	226	216	206	195	183	170	157	142	125	106	82	47	0
		50	284	273	260	248	234	220	205	189	171	150	127	98	57	0
KPvBK-145 KPvBkK-145		10	109	105	100	95	90	85	79	72	66	58	49	38	22	0
		13,3	128	123	117	112	106	99	92	85	77	68	57	44	26	0
		16	144	138	132	125	119	111	104	95	86	76	64	50	29	0
		21,15	171	164	157	149	141	133	123	114	103	91	77	59	34	0
		25	189	182	174	165	156	147	137	126	114	100	85	66	38	0
		35	233	223	213	203	192	180	168	155	140	123	104	81	47	0
		50	280	269	257	244	231	217	202	186	168	148	125	97	56	0
KPvBP-145 KPvBkP-145	4,0	10	112	107	102	97	92	86	80	74	67	59	50	39	22	0
		13,3	131	125	120	114	108	101	94	87	78	69	58	45	26	0
		16	147	141	134	128	121	114	106	97	88	78	66	51	29	0
		21,15	175	168	160	152	144	135	126	116	105	92	78	61	35	0
		25	194	186	177	169	160	150	140	128	116	102	87	67	39	0
		35	238	228	218	207	196	184	172	158	143	126	106	82	48	0
KPvBK-145 KPvBkK-145		10	110	106	101	96	91	85	80	73	66	58	49	38	22	0
		13,3	129	124	118	113	107	100	93	86	78	68	58	45	26	0
		16	145	139	133	126	120	112	105	96	87	77	65	50	29	0
		21,15	172	165	158	150	142	134	124	114	103	91	77	60	34	0
		25	191	183	175	167	158	148	138	127	115	101	85	66	38	0
		35	235	225	215	205	194	182	169	156	141	124	105	81	47	0
		50	282	271	259	246	233	219	203	187	169	149	126	98	56	0
KPvBP-145 KPvBkP-145	5,0	10	113	108	103	98	93	87	81	75	68	60	50	39	23	0
		13,3	132	127	121	115	109	102	95	87	79	70	59	46	26	0
		16	148	142	136	129	122	115	107	98	89	78	66	51	30	0
		21,15	176	169	161	154	145	136	127	117	106	93	79	61	35	0
		25	195	187	179	170	161	151	141	129	117	103	87	68	39	0
		35	240	230	220	209	198	186	173	159	144	127	107	83	48	0
KPvBK-145 KPvBkK-145		10	111	107	102	97	92	86	80	74	67	59	50	39	22	0
		13,3	130	125	119	114	107	101	94	86	78	69	58	45	26	0
		16	146	140	134	128	121	113	106	97	88	77	65	51	29	0
		21,15	174	167	159	152	143	135	125	115	104	92	78	60	35	0
		25	193	185	177	168	159	149	139	128	116	102	86	67	39	0
		35	236	227	217	206	195	183	170	157	142	125	106	82	47	0
		50	284	273	260	248	234	220	205	189	171	150	127	98	57	0

FOR COMMENTS:

KPvSBP-180, KPvSBkP-180



STRUCTURE:

1. Copper electric conductor
2. Two layer insulation of high density radiation-modified polyethylene
3. Lead alloy jacket
4. Bedding of tape of thread bandage
5. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with insulation of high density radiation-modified polyethylene with lead alloy jackets on each conductor for submersible electric pump units, purposed for electric power supply to electric motors of oil production units with nominal alternating voltage 4 and 5 kV.
- This cable is used in wells with average temperature of pumped fluid and high content of acids, alkalis and other hazardous substances.
- Maximum temperature of conductors heating 180 °C

DESIGN:

The cable is produced flat and round with steel galvanized or non-corrosive tape armor

TECHNICAL CHARACTERISTICS:

Cable mark Uн= 4 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark Uн= 5 kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than
KPvSBP-180 KPvSBkP -180	3x10	13,2x30,8	KPvSBP-180 KPvSBkP -180	3x10	13,6x32,0
	3x13,3	13,7x32,3		3x13,3	14,1x33,5
	3x16	14,1x33,5		3x16	14,5x34,7
	3x21,15	14,8x35,6		3x21,15	15,2x36,8
	3x25	15,2x36,8		3x25	15,6x38,0
	3x35	16,3x40,1		3x35	16,7x41,3

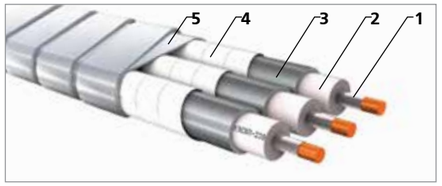
CALCULATED MASS OF CABLES

Uн, kV	Cable mark	Number of conductors and nominal section, mm²					
		3x10	3x13,3	3x16	3x21,15	3x25	3x35
4	KPvSBP-180	1381	1550	1662	1893	2063	2464
	KPvSBkP -180	1332	1498	1605	1833	2000	2397
5	KPvSBP-180	1442	1615	1724	1957	2127	2531
	KPvSBkP -180	1391	1558	1665	1895	2063	2461

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Uн, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C																	
			20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	175	180
KPvSBP-180 KPvSBkP -180	4,0	10	119	115	111	107	103	99	94	89	84	79	73	67	60	52	42	30	21	0
		13,3	140	135	131	126	121	116	110	105	99	92	86	78	70	61	49	35	25	0
		16	157	152	147	142	136	130	124	118	111	104	96	88	79	68	56	39	28	0
		21,15	187	181	175	169	162	155	148	141	132	124	115	105	94	81	66	47	33	0
		25	208	201	194	187	180	172	164	156	147	137	127	116	104	90	73	52	37	0
		35	256	248	239	231	222	212	202	192	181	169	157	143	128	111	90	64	45	0
KPvSBP-180 KPvSBkP -180	5,0	10	120	117	113	109	104	100	95	90	85	80	74	67	60	52	43	30	21	0
		13,3	141	137	132	127	122	117	112	106	100	93	86	79	71	61	50	35	25	0
		16	159	154	148	143	137	132	125	119	112	105	97	89	79	69	56	40	28	0
		21,15	189	183	177	170	164	157	150	142	134	125	116	106	95	82	67	47	33	0
		25	210	203	196	189	182	174	166	157	148	139	128	117	105	91	74	52	37	0
		35	258	250	241	233	223	214	204	193	182	171	158	144	129	112	91	64	46	0

KESBP-230, KESBкP-230



STRUCTURE:

1. Copper tinned single-wire electric conductor
2. Ethylene-propylene rubber-based insulation
3. Lead alloy jacket to each conductor
4. Bedding of tape of thread bandage
5. Steel galvanized or non-corrosive tape armor

SCOPE OF APPLICATION:

- Cable with ethylene-propylene rubber-based insulation with lead alloy jacket for submersible electric pump units purposed for electric power supply to electric motors of oil production units with nominal alternating voltage 4 and 5 kV.
- This cable is used in wells with average temperature of pumped fluid and high content of acids, alkalis and other hazardous substances.
- Maximum temperature of conductors heating 230 °C.

TECHNICAL CHARACTERISTICS:

Cable mark	Nominal voltage, kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than	Cable mark	Nominal voltage, kV	Number and nominal section of conductors, mm²	Dimensional specification of cable, mm, not much than
KESBP-230 KESBkP-230	4,0	3x8	11,7 x 29,9	KESBP-230 KESBkP-230	5,0	3x8	12,5 x 32,3
		3x10	12,9 x 31,9			3x10	13,7 x 34,3
		3x13,3	13,4 x 33,4			3x13,3	14,2 x 35,8
		3x16	13,8 x 34,6			3x16	14,6 x 37,0
		3x21,15	14,4 x 36,4			3x21,15	15,5 x 39,0
		3x25	15,2 x 38,1			3x25	16,0 x 40,5

CALCULATED MASS OF CABLES

Uн, kV	Cable mark	Number of conductors and nominal section, mm²					
		3x8	3x10	3x13,3	3x16	3x21,15	3x25
4	KESBP-230	1472	1727	1908	2048	2293	2495
	KESBkP-230	1426	1619	1795	1931	2169	2366
	KIESBP-230	-	1465	1632	1762	1990	2180
	KIESBkP-230	-	1366	1527	1653	1875	2060
5	KESBP-230	1620	1888	2071	2213	2461	2665
	KESBkP-230	1569	1773	1950	2089	2329	2529
	KIESBP-230	-	1606	1775	1908	2140	2331
	KIESBkP-230	-	1499	1663	1791	2016	2203

LONG-TERM ALLOWABLE CURRENT LOAD:

Cable mark	Uн, kV	Section TPZH, mm²	Long-term allowable current load of cable I, A, at ambient temperature, °C																				
			30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	225	230
KESBP-230 KESBkP-230	4,0	8	108	105	102	99	96	93	90	87	84	80	76	72	68	64	59	54	48	42	34	24	17	0
		10	124	121	118	114	111	107	104	100	96	92	88	83	78	73	68	62	55	48	39	28	20	0
		13,3	146	142	138	134	130	126	122	117	113	108	103	98	92	86	80	73	65	56	46	33	23	0
		16	164	160	155	151	146	142	137	132	127	121	116	110	104	97	90	82	73	63	52	37	26	0
		21,15	195	190	185	180	175	169	163	157	151	145	138	131	123	115	107	98	87	76	62	44	31	0
		25	216	211	205	200	194	187	181	174	168	161	153	145	137	128	119	108	97	84	68	48	34	0
KESBP-230 KESBkP-230	5,0	8	109	106	103	100	97	94	91	88	84	81	77	73	69	64	60	54	49	42	34	24	17	0
		10	125	122	119	115	112	108	105	101	97	93	88	84	79	74	68	63	56	48	40	28	20	0
		13,3	147	143	139	135	131	127	123	118	114	109	104	98	93	87	80	73	66	57	46	33	23	0
		16	165	161	156	152	148	143	138	133	128	122	117	111	104	98	90	82	74	64	52	37	26	0
		21,15	196	191	186	181	176	170	164	158	152	146	139	132	124	116	108	98	88	76	62	44	31	0
		25	218	212	207	201	195	189	182	176	169	162	154	146	138	129	119	109	97	84	69	49	34	0

FOR COMMENTS:

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