Polietilenske cevi za gasovod, vodovod i kanalizaciju

Polyethylene pipes for
water supply, gas and sewerage

35 godina

A.D. IZOLIR

PREINSULATION PIPES AND PIPES TECHNIQUE

www.izolir.rs

Sertifikati i standardi

Certificates and standards

CERTIFICATE

CERTIND

Confirms that the management system of

AD IZOLIR ZRENJANIN

registration address: Serbia, Novosadski put bb, 23000 Zrenjanin,
-production of pre-insulated pipes and fittings – "IZOPEN",
-production pipes with Polyethylene coating – "IZOPOL",
and remote location: Serbia, Železnička 62 b, 26310 Alibunar
-production Polyethylene PEHD pipes

conforms to the requirements of

ISO 9001:2015

Certification scope:

Development, production, delivering and installation of:
-Design and installation of preinsulated bonded pipe systems for district heating – EN 13941; -Preinsulated steel pipes and pipes elements with polyurethane based on cyclopentane for district heating (IZOPEN) – EN 235; EN 448; EN 488; -Polyethylene coating for steel pipes (IZOPOL) – DIN 30670; -Thermo shrinkable Polyethylene joint – EN 489; -Polyethylene PEHD pipes with "Corona" treatment – EN 253; -Plastics piping systems of Polyethylene for the supply of gaseous fuels – EN 1555, Plastics piping systems of Polyethylene for wather supply, for drainage and sewerage under pressure – EN 12201.

Certificate no.: 18673 C

GENERAL MANAGER
Eng. Dumitru Radut

Original approval: 10.11.2015
Current certification (recertification): 14.09.2018
Current certification cycle ends on: 09.11.2021 under condition of annual visa
Recertification shall be completed prior to the current certification cycle end date

The certification body reserves the right to suspend or withdraw the present certificate if during surveillance audits it is identified that the organization does not continue to respect the specified requirements.

CERTIND SA - CERTIFICATION BODY
UGIR 1903 Palace, 27-29 George Enescu street, Bucharest 1

CERTIFICATE

CERTIND

Confirms that the management system of

AD IZOLIR ZRENJANIN

registration address: Serbia, Novosadski put bb, 23000 Zrenjanin,
-production of pre-insulated pipes and fittings – "IZOPEN",
-production pipes with Polyethylene coating – "IZOPOL",
and remote location: Serbia, Železnička 62 b, 26310 Alibunar
-production Polyethylene PEHD pipes

conforms to the requirements of

OHSAS 18001:2007

Certification scope:

Development, production, delivering and installation of:
-Design and installation of preinsulated bonded pipe systems for district heating – EN 13941; -Preinsulated steel pipes and pipes elements with polyurethane based on cyclopentane for district heating (IZOPEN) – EN 235; EN 448; EN 488; -Polyethylene coating for steel pipes (IZOPOL) – DIN 30670; -Thermo shrinkable Polyethylene joint – EN 489; -Polyethylene PEHD pipes with "Corona" treatment – EN 253; -Plastics piping systems of Polyethylene for the supply of gaseous fuels – EN 1555, Plastics piping systems of Polyethylene for wather supply, for drainage and sewerage under pressure – EN 12201.

Certificate no.: 18673 SS

GENERAL MANAGER
Eng. Dumitru Radut

Original approval: 10.11.2015
Current certification (recertification): 14.09.2018
Current certification cycle ends on: 11.03.2021 under condition of annual visa
Recertification shall be completed prior to the current certification cycle end date

The certification body reserves the right to suspend or withdraw the present certificate if during surveillance audits it is identified that the organization does not continue to respect the specified requirements.

CERTIND SA - CERTIFICATION BODY
UGIR 1903 Palace, 27-29 George Enescu street, Bucharest 1

CERTIFICATE

CERTIND

Confirms that the management system of

AD IZOLIR ZRENJANIN

registration address: Serbia, Novosadski put bb, 23000 Zrenjanin,
-production of pre-insulated pipes and fittings – "IZOPEN",
-production pipes with Polyethylene coating – "IZOPOL",
and remote location: Serbia, Železnička 62 b, 26310 Alibunar
-production Polyethylene PEHD pipes

conforms to the requirements of

ISO 14001:2015

Certification scope:

Development, production, delivering and installation of:
-Design and installation of preinsulated bonded pipe systems for district heating – EN 13941; -Preinsulated steel pipes and pipes elements with polyurethane based on cyclopentane for district heating (IZOPEN) – EN 235; EN 448; EN 488; -Polyethylene coating for steel pipes (IZOPOL) – DIN 30670; -Thermo shrinkable Polyethylene joint – EN 489; -Polyethylene PEHD pipes with "Corona" treatment – EN 253; -Plastics piping systems of Polyethylene for the supply of gaseous fuels – EN 1555, Plastics piping systems of Polyethylene for wather supply, for drainage and sewerage under pressure – EN 12201.

Certificate no.: 18673 M

GENERAL MANAGER
Eng. Dumitru Radut

Original approval: 10.11.2015
Current certification (recertification): 14.09.2018
Current certification cycle ends on: 09.11.2021 under condition of annual visa
Recertification shall be completed prior to the current certification cycle end date

The certification body reserves the right to suspend or withdraw the present certificate if during surveillance audits it is identified that the organization does not continue to respect the specified requirements.

CERTIND SA - CERTIFICATION BODY
UGIR 1903 Palace, 27-29 George Enescu street, Bucharest 1

DOO HIDROKOMERC Obezbeđenje kvaliteta
LABORATORIJA ZA ISPITIVANJE

IZVEŠTAJ O ISPITIVANJU BR. EKS-VPE- 06/17

Predmet ispitivanja: HDPE cevi za distribuciju vode: DN110, DN125, DN140, DN160, DN180 DN200, DN225, DN250, DN280 SDR17 radnog pritiska PN10 bar.
Cevi su izrađene prema standardu SRPS EN 12201-2
od materijala HDPE Tip: PE -100 Borealis HE 3490 LS

Naručilac: IZOLIR A.D. , Novosadsk

Zahtev/Ponuda/Ugovor: EKS-VPE -08/17

Sadržaj: Ukupno 6 strana

Izveštaj odobrio:

DOO HIDROKOMERC Obezbeđenje kvaliteta
LABORATORIJA ZA ISPITIVANJE

IZVEŠTAJ O ISPITIVANJU BR. EKS-VPE- 07/17

Predmet ispitivanja: HDPE cevi za distribuciju vode: DN110, DN125, DN140, DN160, DN180 DN200, DN225, DN250, DN280 SDR11 radnog pritiska PN16 bar.
Cevi su izrađene prema standardu SRPS EN 12201-2
od materijala HDPE Tip: PE -100 Borealis HE 3490 LS

Naručilac: IZOLIR A.D. , Novosadsk

Zahtev/Ponuda/Ugovor: EKS-VPE -08/17

Sadržaj: Ukupno 6 strana

Izveštaj odobrio:

DOO HIDROKOMERC Obezbeđenje kvaliteta
LABORATORIJA ZA ISPITIVANJE

IZVEŠTAJ O ISPITIVANJU BR. EKS-VPE- 08/17

Predmet ispitivanja: HDPE cevi za distribuciju vode: DN110, DN125, DN140, DN160, DN180 DN200, DN225, DN250, DN280. SDR26 radnog pritiska PN6 bar.
Cevi su izrađene prema standardu SRPS EN 12201-2
od materijala HDPE Tip: PE -100 Borealis HE 3490 LS.

Naručilac: IZOLIR A.D. , Novosadski put b.b. 23000 Zrenjanin

Zahtev/Ponuda/Ugovor: EKS-VPE -06/17

Sadržaj: Ukupno 6 strana

Izveštaj odobrio:

Rukovodilac laboratorije
Đorđe Panić ing. teh. polimera

A.D. "IZOLIR"

Gradski zavod za javno zdravlje
Centar za higijenu i humanu ekologiju
Laboratorija za humanu ekologiju i ekotoksikologiju
11000 Beograd, Bulevar despota Stefana 54-a
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O 301

IZVEŠTAJ O ISPITIVANJU

Broj: 17-08-0709
Datum:19.07.2017.

Broj predmeta: 265

A PODACI O PODNOSIOCU ZAHTEVA
Naziv: " IZOLIR " A.D.
Adresa: NOVOSADSKI PUT BB, 23000 ZRENJANIN

B PODACI O UZORKU
Naziv uzorka: CEV ZA TRANSPORT VODE ZA PICE - PEHD- 100
Dostavio: Donela stranka
Primio: Zorica Tontović, sanitarni tehničar | Datum i vreme prijema: 07.07.2017. u 09:10
Metode uzorkovanja:
Zahtevano ispitivanje: Zdravstvena ispravnost, Radioaktivnost

Napomene:
Rezultati ispitivanja odnose se samo na ispitivani uzorak.

Sastavni deo ovog izveštaja je izveštaj o ispitivanju Instituta za nuklearne nauke „VINČA", Vinča br. H17/1504 od 07.07.2017 godine.

Polietilenske cevi za vodu - PE 100

Polyethylene water pipes - PE 100

POLIETILENSKE CEVI ZA VODU - PE 100

Polietilenske cevi su proizvedene od polietilena visoke gustine PE 100 prema standardu SRPS EN 12201, time, zadovoljavaju sve zahteve evropskih normi. Ovim delom SRPS EN 12201 utvrđuju se karakteristike cevi od polietilena (PE 100) za podzemnu primenu, namenjenu za distribuciju vode za ljudsku upotrebu, odvodnjavanje i kanalizaciju pod pritiskom, kanalizacione sisteme pod vakuumom, kao i za druge fluide. Cevi od polietilena se odlikuju visokom fleksibilnošću i malom specifičnom masom, što omogućava lak transport i jednostavnu ugradnju. Dug vek ovih cevi garantuje hemijska postojanost, otpornost na habanje uz visoku unutrašnju hidrostatičku otpornost. Dobra otpornost materijala na širenje pukotina garantuje veliku sigurnost pri projektovanju cevovoda na visoke pritiske.

Sve cevi su ispitane na osnovu pojedinačnih tačaka iz standarda SRPS EN 12201 i kao takve zadovoljavaju sve važeće međunarodne I evropske norme SRPS EN 12201-2.

POLYETHYLENE WATER PIPES – PE 100

Polyethylene water pipes are made of high-density polyethylene PE 100 in accordance with SRPS EN 12201 standard and thus they comply with all the requirements of European regulations. This section of SRPS EN 12201 standards defines the characteristics of polyethylene pipes (PE 100) used for underground water supply pipeline intended for human consumption, drainage and sewerage under pressure, vacuum sewerage systems as well as for other fluids transport. High flexibility and low specific gravity of the pipes make them easy for transport and simple for installation. Due to their chemical and abrasion resistance and long-term hydrostatic strength, these pipes have a long life expectancy. In addition, the resistance to crack propagation assures safety in high pressure pipelines design.

All pipes have been subjected to a range of tests in accordance with the requirements of SRPS EN 12201 standard and comply with all international and European SRPS EN 12201-2 regulations in force.

d mm	SDR26 / S12,5 6 bar		SDR17 / S8 10 bar		SDR11 / S5 16 bar	
	(s) mm	Kg/m	(s) mm	Kg/m	(s) mm	Kg/m
20	—	—	—	—	2,00	0,12
25	—	—	2,00	0,15	2,30	0,17
32	—	—	2,00	0,21	3,00	0,28
40	—	—	2,40	0,29	3,70	0,43
50	2,00	0,31	3,00	0,46	4,60	0,67
63	2,50	0,49	3,80	0,72	5,80	1,01
75	2,90	0,67	4,50	1,02	6,80	1,48
90	3,50	0,97	5,40	1,46	8,20	2,14
110	4,20	1,45	6,60	2,17	10,00	3,17
125	4,80	1,87	7,40	2,76	11,40	4,11
140	5,40	2,31	8,30	3,46	12,70	5,12
160	6,20	3,03	9,50	4,52	14,60	6,66
180	6,90	3,79	10,70	5,71	16,40	8,42
200	7,70	4,69	11,90	7,05	18,20	10,40
225	8,60	5,89	13,40	8,93	20,50	13,10
250	9,60	7,30	14,80	11,00	22,70	16,20
280	10,70	9,10	16,60	13,70	25,40	20,30
315	12,10	11,60	18,70	17,40	28,60	25,60

D - spoljni prečnik cevi
outer diameter of the pipe

S - debljina zida cevi
thickness of pipe wall

Polietilenske cevi za gas - PE 100

Polyethylene pipes for gas - PE 100

POLIETILENSKE CEVI ZA GAS - PE 100

Cevi za gas koje se koriste u izgradnji gasovoda proizvode se od polietilena visoke gustine PE80 ili PE100, čiji kvalitet garantuje da će i posle 50 godina cevi trpeti isto naprezanje. Proizvodnja i kontrola kvaliteta usaglašena je sa važećim domaćim standardom: SRPS EN 1555.

Materijal je netoksičan, lak za transport i rukovanje. Cevi su fleksibilne i otporne na vibracije, seizmičke udare i pomeranje tla. Dozvoljeno je trajno toplotno opterećenje do +60°C, a trenutno do +80°C. Niski su gubici pritiska jer je koeficijent trenja mali. Spajanje cevi se izvodi (u zavisnosti od prečnika) spojnicama ili zavarivanjem: elektrofuzionim ili sučeonim. Polietilenske cevi za snabdevanje gasovitim gorivima mogu se polagati iznad i u zemlju i pod vodom.

POLYETHYLENE GAS PIPES – PE 100

The gas pipes used for installation of natural gas pipelines are made of quality high-density polyethylene PE 100 which assures the same tensile strength even after 50 years of use. The manufacturing and quality control comply with the local SRPS EN 1555 standard in force.

The material is non-toxic, easy for transport and handling. The pipes are flexible and resistant to vibrations, earthquake effects and ground movements. Allowable thermal limit is in the range of +60°C for long term exposure and +80°C for short term exposure. The friction coefficient is low which results in reduced pressure losses. Depending on the diameter, the pipes are either electrofused or butt-fused or mechanically jointed . Polyethylene pipes for gas supply may be installed below or above ground or as underwater pipeline.

Tehničke karakteristike polietilenskih cevi

Technical characteristics of polyethylene pipes

Gustina / Density	959 kg/m^2
Granica elastičnosti / Elasticity limit	24 Mpa
Istezanje pri kidanju / Stretching during tearing	>600%
Brzina tečenja rastopa MFR / MFR melt flow rate	0,5g / 10min
Keof. termičke provodljivosti / Coefficient of thermal conductivity	0,38 W/mK

d mm	SDR11 / S5 10 bar	
	(s) mm	Kg/m
20	3,00	0,16
25	3,00	0,21
32	3,00	0,28
40	3,70	0,43
50	4,60	0,67
63	5,80	1,01
75	6,80	1,48
90	8,20	2,14
110	10,00	3,17
125	11,40	4,11
140	12,70	5,12
160	14,60	6,66
180	16,40	8,42
200	18,20	10,40
225	20,50	13,10
250	22,70	16,20
280	25,40	20,30
315	28,60	25,60

D - spoljni prečnik cevi
outer diameter of the pipe

S - debljina zida cevi
thickness of pipe wall

PREDNOSTI PE CEVI ZA VODU

- Visoka pouzdanost i dokazane performanse funkcionisanja čine PE odličnim izborom, posebno kod ukopanih cevnih sistema;
- Otpornost na niske temperature - zbog svoje visoke rastegljivosti, žilavosti i elastičnosti, „IZOLIR"-ove PE-cevi ne stvaraju probleme prilikom ugradnje i rada na niskim temperaturama;
- Visoka otpornost na udare – veliki otpor na hidraulički udar, zamor i habanje eliminiše potrebu za većim nominalnim pritiscima i smanjuje vrednost investicije;
- Poređenja su pokazala da polietilenske cevi imaju veću otpornost na abraziju od drugih materijala, pa PE čine najpoželjnijim materijalom za cevni transport rastvorljivih materija;
- Odlične hidrauličke karakteristike (niska apsolutna hrapavost) - glatka površina i otpornost na turbulentno strujanje fluida omogućuju veći protok;
- Odlična hemijska otpornost - otpornost na veliki broj hemiskih agenasa;
- Zavarljivost - zbog dobre zavarljivosti i elastičnosti, PE-cevovodi velike dužine mogu biti spojeni van rova pa zatim položeni (što smanjuje potrebnu širinu rova) a zavareni spojevi će biti jaki i pouzdani. Široki spektar metoda ugrađivanja, PE-cevi nude instalaterima brojna rešenja za ugradnju, koja mogu da obezbede značajne uštede vremena i troškova, na primer PE cevi se preferiraju kod instalacija bez rova ili sa uskim
- Dug vek trajanja od min 50 godina
- Otpornost na UV zračenje
- Otpornost na stvaranje naslaga
- Zdravstvena ispravnost u dodiru sa prehrambenim proizvodima
- Dozvoljeno je trajno toplotno opterećenje do +60oC, a trenutno do +80oC. Otporne su i na niske temperature.
- Boja cevi: crna, sa plavim linijama

ADVANTAGES OF PE WATER PIPES

- High proven reliability and performance especially with buried pipelines
- Resistance to low temperatures – due to their high ductility, toughness and elasticity PE pipes made by IZOLIR are easily installed even at low temperatures;
- High impact resistance – as they are hydraulic impact, fatigue and wear resistant, the need for higher pressure nominal is avoided and the investment price reduced;
- Comparison with pipes made of other materials showed that the PE pipes have higher abrasion resistance than other materials which makes polyethylene a material of choice for pipes used for the transport of soluble substances;
- Excellent hydraulic characteristics (low absolute roughness) – smooth surface and resistance to turbulent fluid flow enable higher flow rate;
- Excellent chemical resistance – resistance to a great number of chemical agents;
- Weldability – due to good weldability and elasticity PE long length pipelines may be joined outside trench and then laid in it (which reduces the width of the trench) while providing strong and reliable welded joints at the same time. With a wide range of installation methods, PE pipes offer numerous time-saving and cost-reducing installation solutions, e.g. PE pipes are the most suitable with above ground installations and installation in narrow trenches
- Long life expectancy of min. 50 years
- UV resistance
- Resistant to formation of deposits
- Health and safety (in contact with food)
- Allowable thermal limit is in the range of +60℃ for long term exposure and +80℃ for short term exposure. Resistant to low temperatures
- Color of pipes: black, with blue stripes

PREDNOSTI PE CEVI ZA GAS

- Upotreba PE cevi za gas je u celom svetu u porastu. Mala težina im omogućuje lako rukovanje, jednostavno, brzo i pouzdano spajanje. Fleksibilne su .Izuzetno su hemijski otporne pa se mogu polagati i u agresivno tlo. Vrlo su otporne na udar čak i na niskim temperaturama. Ove cevi ne korodiraju i imaju životni vek preko 50 godina. Cevi u potpunosti odgovaraju SRPS-EN1555, ISO 4437 (DIN8074). Obeležavanje cevi odgovara Evropskim normama.

Boja cevi: crna, sa oranž linijama.

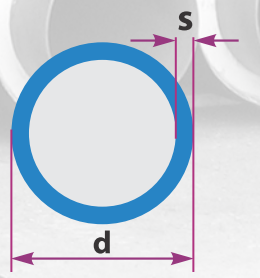
ADVANTAGES OF PE GAS PIPES

- The demand for PE gas pipelines is increasing globally. Their low weight enables easy handling and simple, quick and reliable jointing. They are flexible and chemically resistant so they can be installed even in aggressive soils. They are impact resistant even at low temperatures. These pipes do not corrode and have a life expectancy of more than 50 years. They comply with SRPS-EN 1555, ISO 4437 (DIN8074). Labeling of pipes is in accordance with the European regulations.
- Color of pipes: black, with orange stripes.

$$SDR = d / s$$

$$S = (SDR - 1) / 2$$

$$s = d / (2S+1)$$



SDR = standardni odnos dimenzija
s = debljina zida cevi (mm)
d = spoljni prečnih cevi (mm)
S = serija cevi
SDR = standard dimension ratio
s = wall thickness (mm)
d = Outside diametar (mm)
S = Pipe series

AD IZOLIR
Proizvodnja predizolovanih cevi i cevnih elemenata
za toplovode, vrelovode, naftovode, gasovode i vodovode

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