



World's Leading Provider of Skin-Effect Heat Tracing Solutions



August 2017

SST Group is the largest producer and supplier of electric heating cables and heat tracing solutions in Europe.

- Founded in **1991**
- **1300** employees
- **4** plants in Moscow region
- **1 300 000** km of heating cables produced
- **13 000 000** electric heating cable systems
- **5 500 000** units of temperature control equipment
- **8 000** industrial heat tracing systems installed







Industrial solutions



OKB Gamma LLC

Manufacturing of all components of heat tracing systems



SST Energomontage LLC

EPC projects implementation



SST GmbH

International sales & support

Home solutions

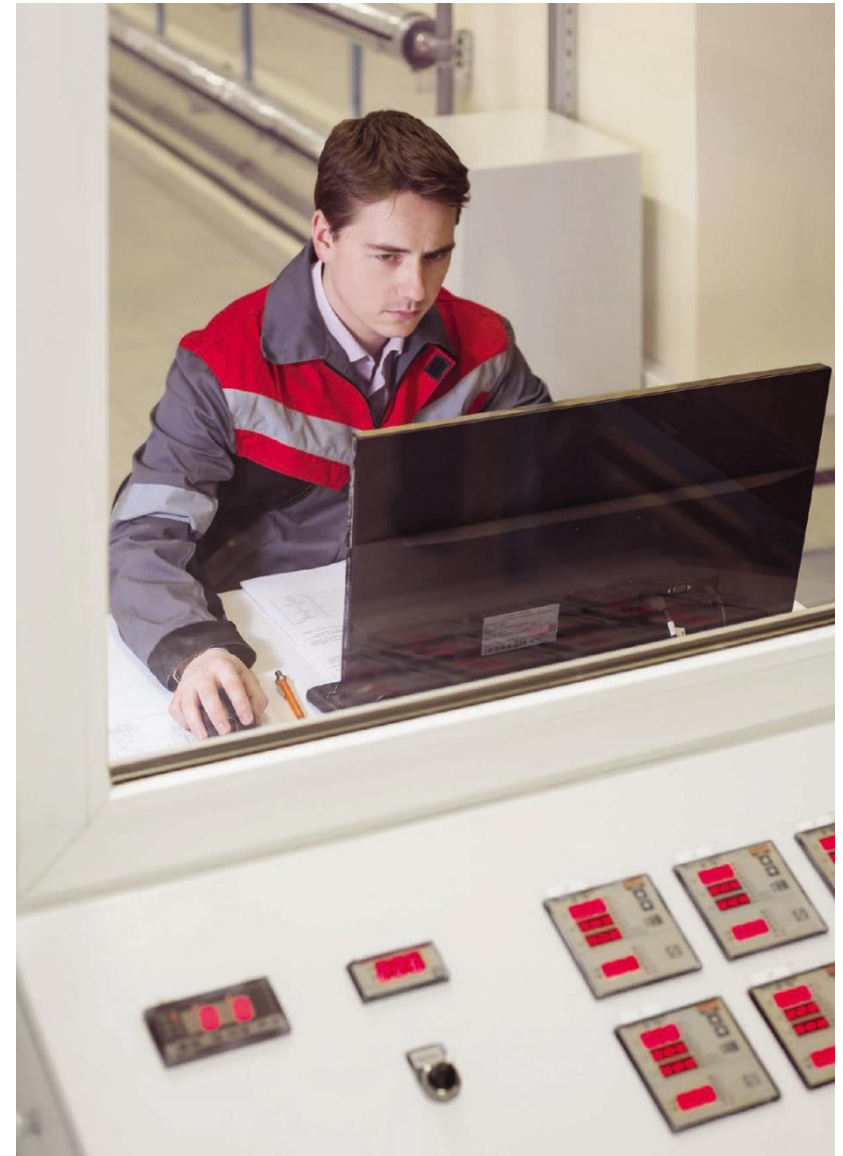


Special Systems & Technologies LLC

Manufacturing of heating systems for comfortable living

Technical Expertise

- ✓ Robust products & systems – operating in the most extreme climate conditions
- ✓ Solutions for challenging areas: underground, subsea, downhole heating
- ✓ The most modern materials & equipment
- ✓ Own R&D center
- ✓ Remote monitoring of the system's parameters
- ✓ Ease of maintenance & repair
- ✓ Proven reliability & electrical safety



Manufacturing

- ✓ №1 electric heating cable plant in Europe
- ✓ Production facilities for all types of heating cable systems
- ✓ Strict quality control procedures – 100% of our products undergo testing
- ✓ All products meet international standards and technical requirements
- ✓ ISO 9001 Compliance Certification since 2004



EPC Contracting

- ✓ Over 20 years of experience in EPC, including international projects
- ✓ Single point of responsibility
- ✓ Full engineering support, 100+ design engineers
- ✓ 60+ installers (in-house)
- ✓ 15 000+ industrial heat tracing projects implemented
- ✓ International sales & project support team
- ✓ 5+ years warranty



- All products meet international standards and technical requirements
- ISO 9001 Compliance Certification since 2004
- Customs Union Technical Regulations Certificate (TR CU Certificate)
- IEC Ex Certificates

100% Quality Control



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

Certificate No.: IECEx CCVE 12.0002X Issue No.: Certificate history:

Status: Current

Date of issue: 2012-04-17 Page 1 of 3

Applicant: Special Systems and Technologies LLC
building 7, Proektiruyemiy proezd 5274, Mytischy, Moscow region, 141008, Russian Federation

Electrical Apparatus: Self-regulating electrical heating types HTM, HTA, HTP, BTX types with power and end termination size TML, TKR, TRW, TKTM, CP-4

Optional accessory:

Type of Protection: Increased safety e and dust ignition protection t

Marking: Ex e IIC T3 to T8
Ex to IIC T200°C to T185°C
dIPG Stands e +dIPG

Approved for issue on behalf of the IECEx Certification Body: Alexander Zalgin
Position: Head of NANIO 'CCVE'

Signature: (for printed version) [Signature]
Date: 2012.04.17

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
NANIO 'CCVE'
109377, Moscow, P.O.Box 22,
Russian Federation

Certificate

Standard: ISO 9001:2015

Certificate Registr. No: 01 100 1321914

TÜV Rheinland Cert GmbH certifies:

Certificate Holder: Special systems and technologies LLC,
Group Teploluxe LLC
Proektiruyemiy proezd 5274, Building 7,
Mytischy, Moscow region, P.O. 141008
Russian Federation

Scope: Design and development, manufacture, sales, warranty and post-warranty service of cable and wire products, items based on these products, electric heating systems, engineering systems and their assembly components, heating products, metal structures and fixtures, including "TEPLOLUXE", "TEPLOMAD", "RH4S-15500", "National comfort", "Freezstop", "NEPTUN", "NEPTUN IWS" and others.

An audit was performed. Proof has been furnished that the requirements according to ISO 9001:2015 are fulfilled.

The due date for all future audits is May 28th.

Validity: The certificate is valid from 14.07.2016 until 13.07.2019.
First certification 2004, CN 75 100 70030.

11.07.2016.

TÜV Rheinland Cert GmbH
An Graun-Stein 51-10250 Sigmaringen

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

Certificate No.: IECEx CCVE 11.0001X Issue No.: Certificate history:

Status: Current

Date of issue: 2011-03-28 Page 1 of 3

Applicant: Special Systems and Technologies LLC
building 7, Proektiruyemiy proezd 5274, Mytischy, Moscow region, 141008, RUSSIA, Russian Federation

Electrical Apparatus: Electrical heating system RH5-15500

Optional accessory:

Type of Protection: Increased Safety

Marking: Ex e IIC T3 to T8

Approved for issue on behalf of the IECEx Certification Body: Alexander Zalgin
Position: Head of CB NANIO CCVE

Signature: (for printed version) [Signature]
Date: 2011-03-28

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Certificate issued by:
NANIO 'CCVE'
109377, Moscow, P.O.Box 22,
Russian Federation

VDE Prüf- und Zertifizierungsinstitut

GUTACHTEN MIT FERTIGUNGSÜBERWACHUNG
CERTIFICATE OF CONFORMITY WITH FACTORY SURVEILLANCE

Special Systems & Technologies LLC
Limited Liability Company
Proektiruyemiy proezd 5274 Building 7
141008 MYTISCHY, MOSCOW REG.
RUSSIAN FED.

ist berechtigt, für ihr Produkt /
is authorized to use for their product
Isolierte Metallleitung
Heating cable

die hier abgebildeten markenrechtlich geschützten Zeichen
for the abovementioned trademarks /
the legally protected Marks as shown below for the types referred to on page 2 ff.

VDE REG. Nr. 8602 autorisiert VDE REG. Nr. 8602
REG. Nr. 8602

Geprüft und zertifiziert nach /
Tested and certified according to
IEC 60335-2:2004-07
(in Abhängigkeit von 7 mit Änderungen 1a)

Bestellref. zum / valid until: 2018-12-31

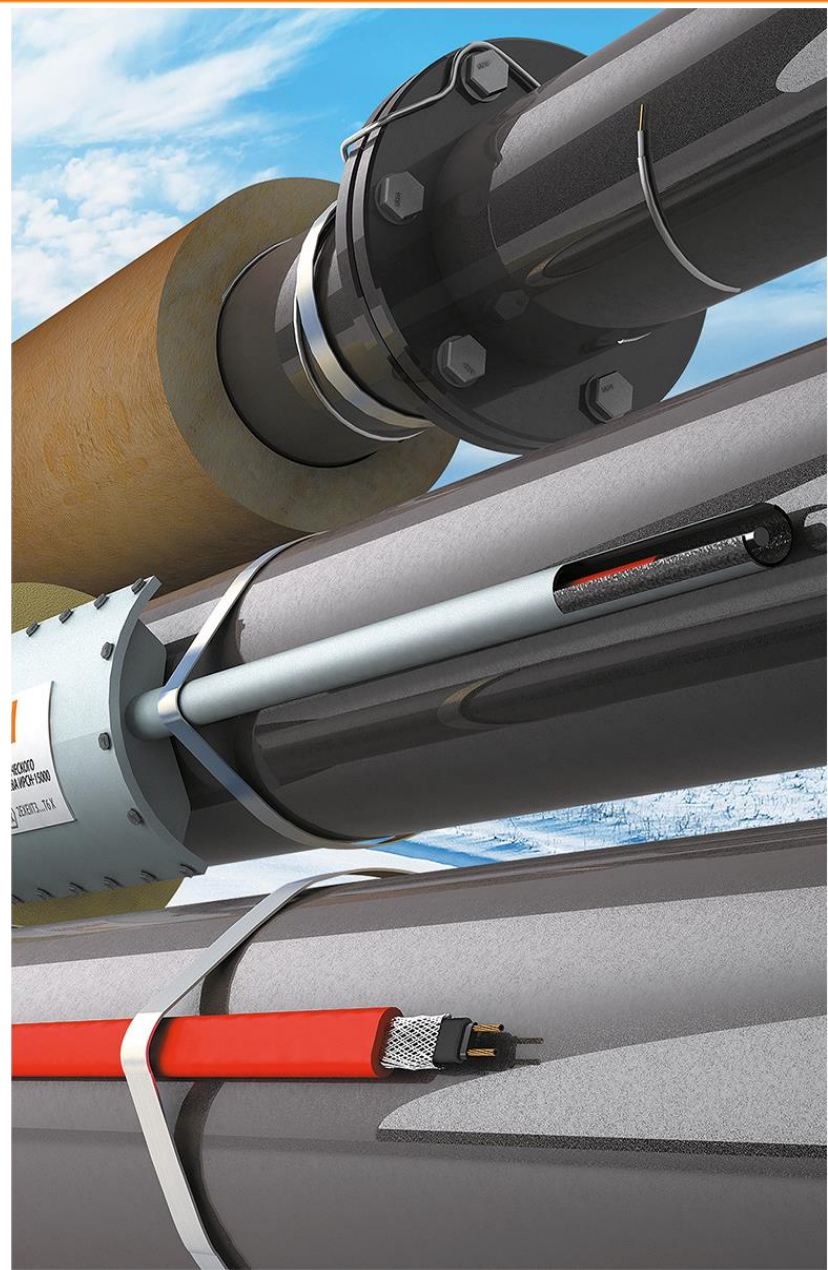
VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Zertifizierungsbüro / Certification
Office

Auftrags-Nr.: 40003525 Blatt 1
Certificate No. 40003525 Page
Date of issue: 2012-07-30
Date of expiry: 2015-10-28

Heat tracing solutions, produced and provided by SST Group:

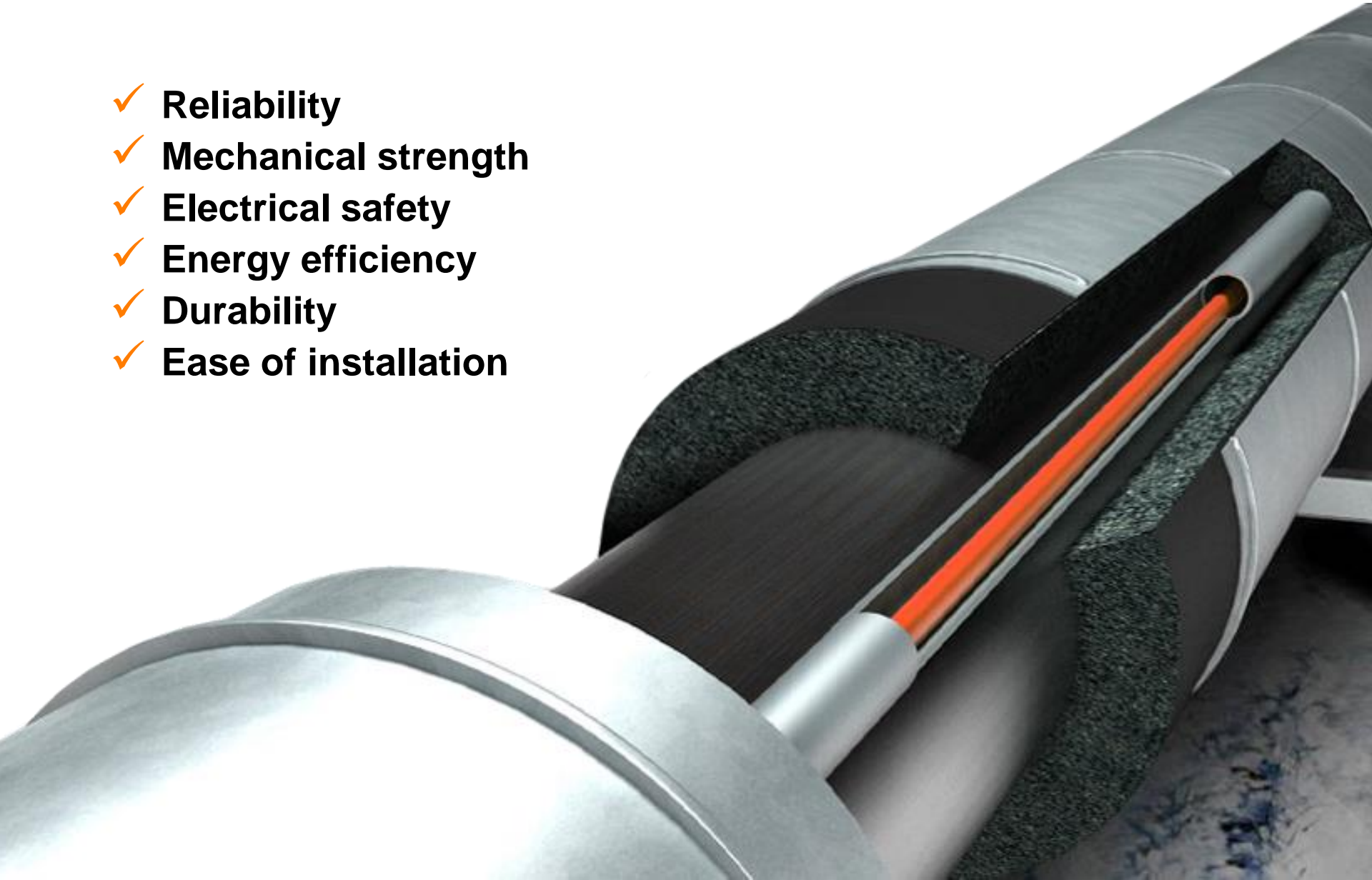
- Self-regulating heating cables
- Series-resistance heating cables
- Longline systems
- Skin-effect systems
- Full engineering & electronics support

We provide all types of heat tracing and tailor the best solution to your project

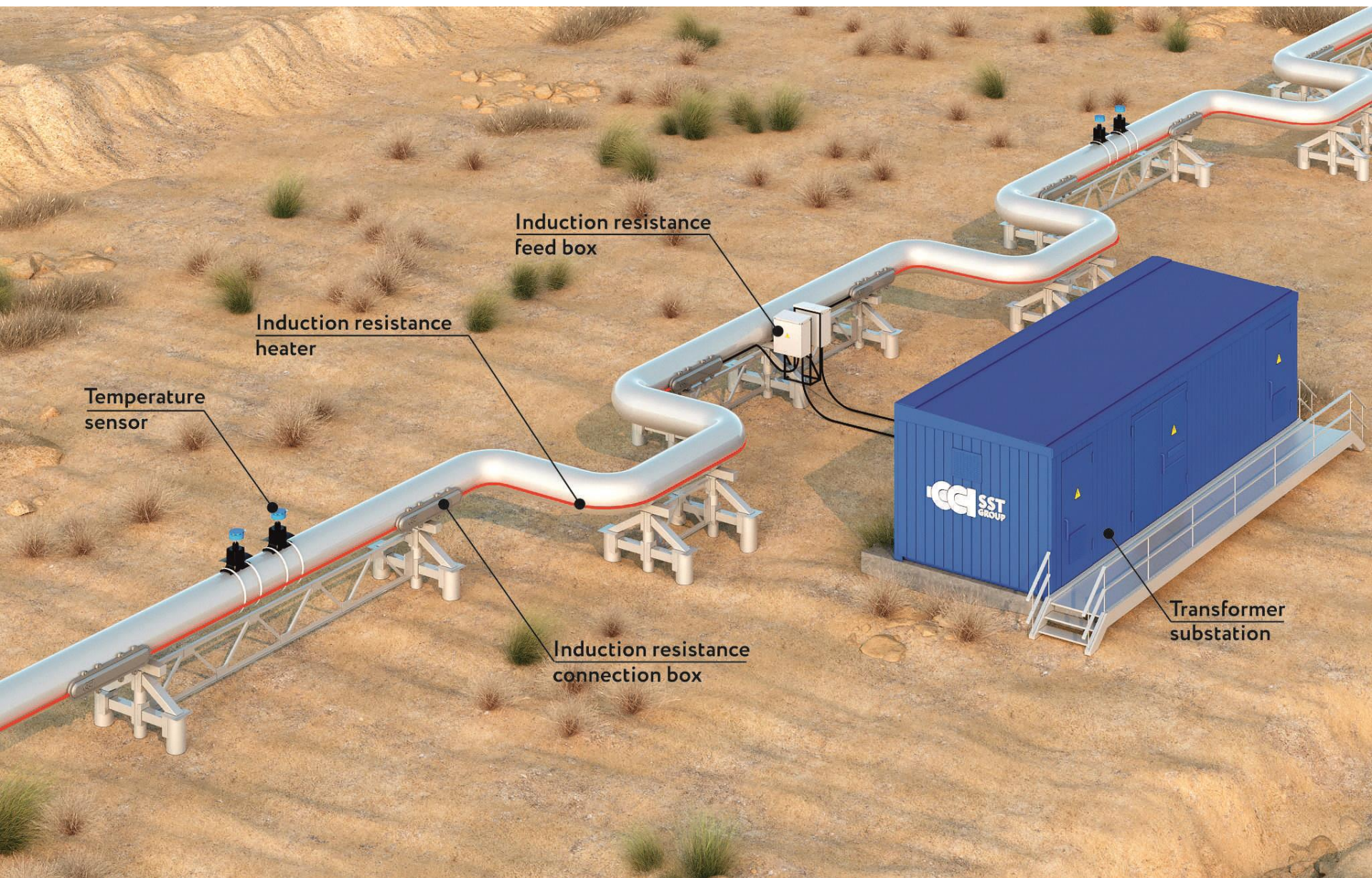


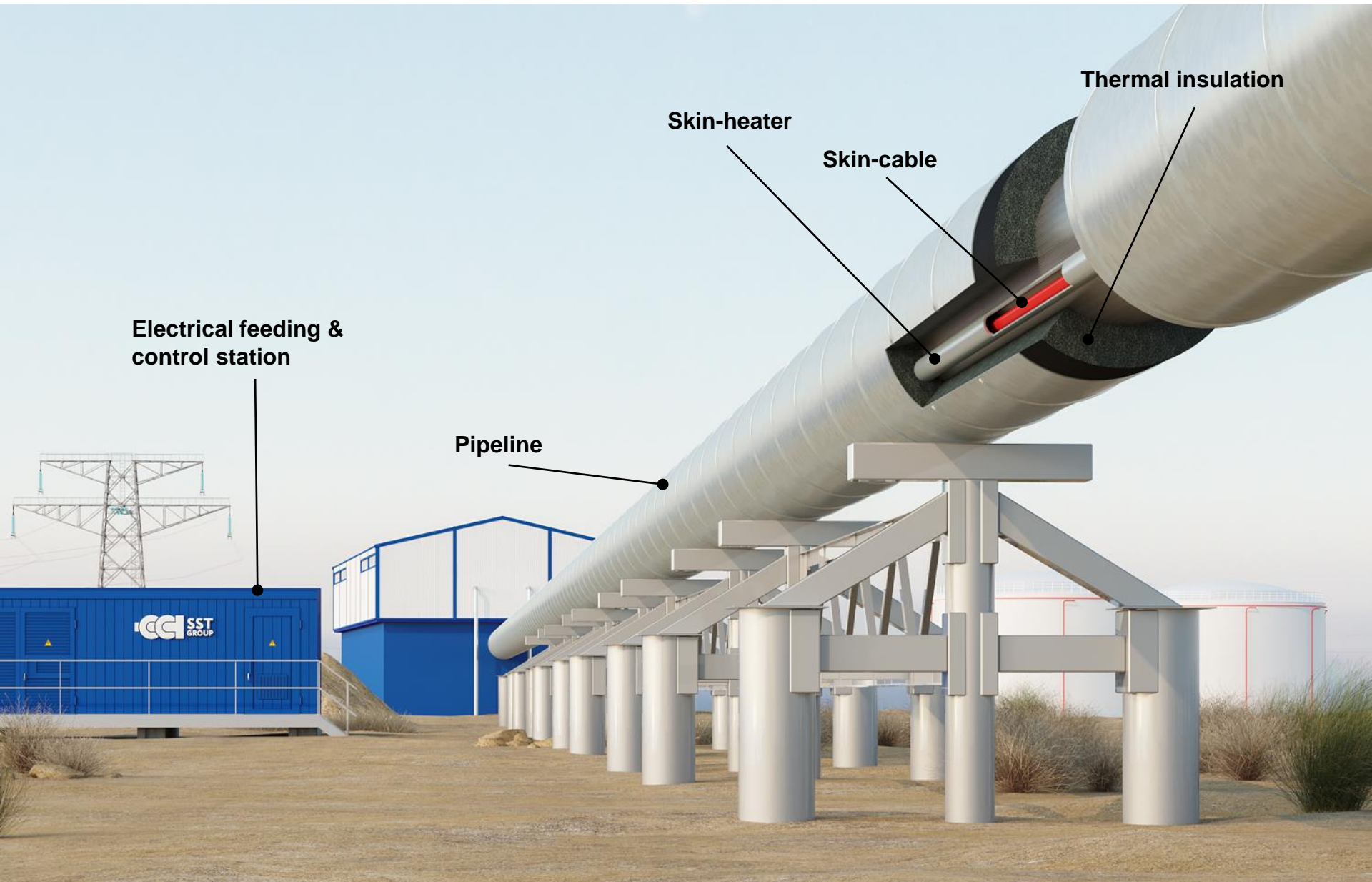
Skin-effect heat tracing system – optimal solution for heating extra long pipelines

- ✓ Reliability
- ✓ Mechanical strength
- ✓ Electrical safety
- ✓ Energy efficiency
- ✓ Durability
- ✓ Ease of installation



Typical Layout of Skin-Effect Heating System (1.1)





Electrical feeding & control station

Pipeline

Skin-heater

Skin-cable

Thermal insulation



Incoming supply distribution assembly with the automatic transfer circuit-breaker in the block-box of the electric heating system



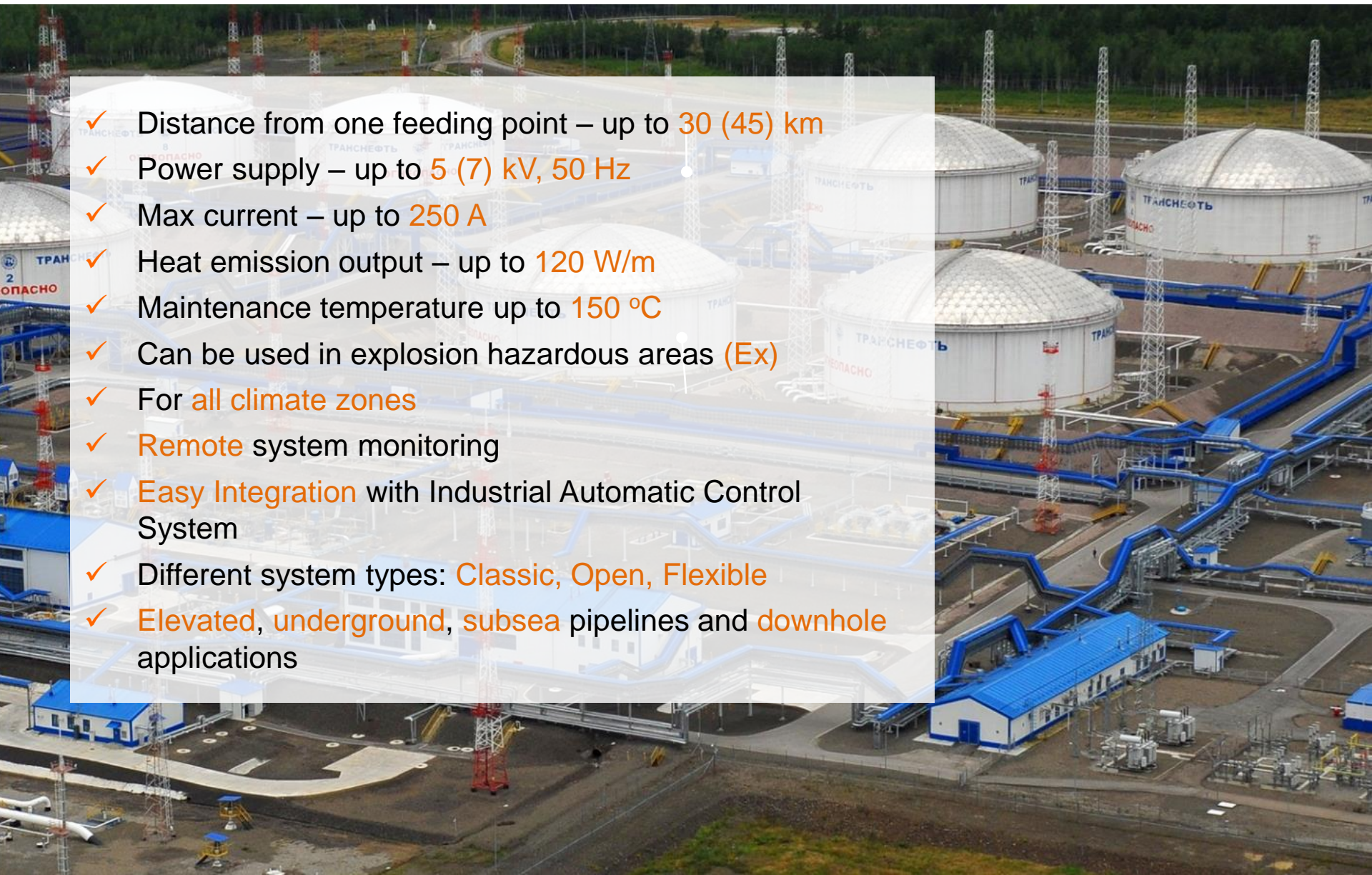
Transformer section

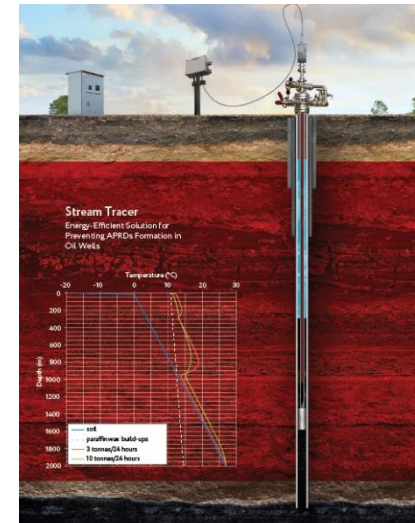


Distributing board and control cabinets

Typical Layout of Skin-Effect Heating System (1.4)



- 
- An aerial photograph of an industrial facility, likely a refinery or chemical plant. The image shows several large, white, dome-shaped storage tanks with blue piping connecting them. The tanks have the word 'ТРАНСЕФТЬ' (TRANSSEFT) written on them. There are also blue-roofed buildings and various industrial structures in the background. The overall scene is a complex industrial site with a mix of white, blue, and grey tones.
- ✓ Distance from one feeding point – up to 30 (45) km
 - ✓ Power supply – up to 5 (7) kV, 50 Hz
 - ✓ Max current – up to 250 A
 - ✓ Heat emission output – up to 120 W/m
 - ✓ Maintenance temperature up to 150 °C
 - ✓ Can be used in explosion hazardous areas (Ex)
 - ✓ For all climate zones
 - ✓ Remote system monitoring
 - ✓ Easy Integration with Industrial Automatic Control System
 - ✓ Different system types: Classic, Open, Flexible
 - ✓ Elevated, underground, subsea pipelines and downhole applications



Outdoor, elevated

- Classic skin-effect heating system*
- Open skin-effect heating system*
- Flexible skin-effect heating system

Underground

- Classic skin-effect heating system*
- Open skin-effect heating system*
- Flexible skin-effect heating system

Subsea

- Flexible skin-effect heating system

Downhole

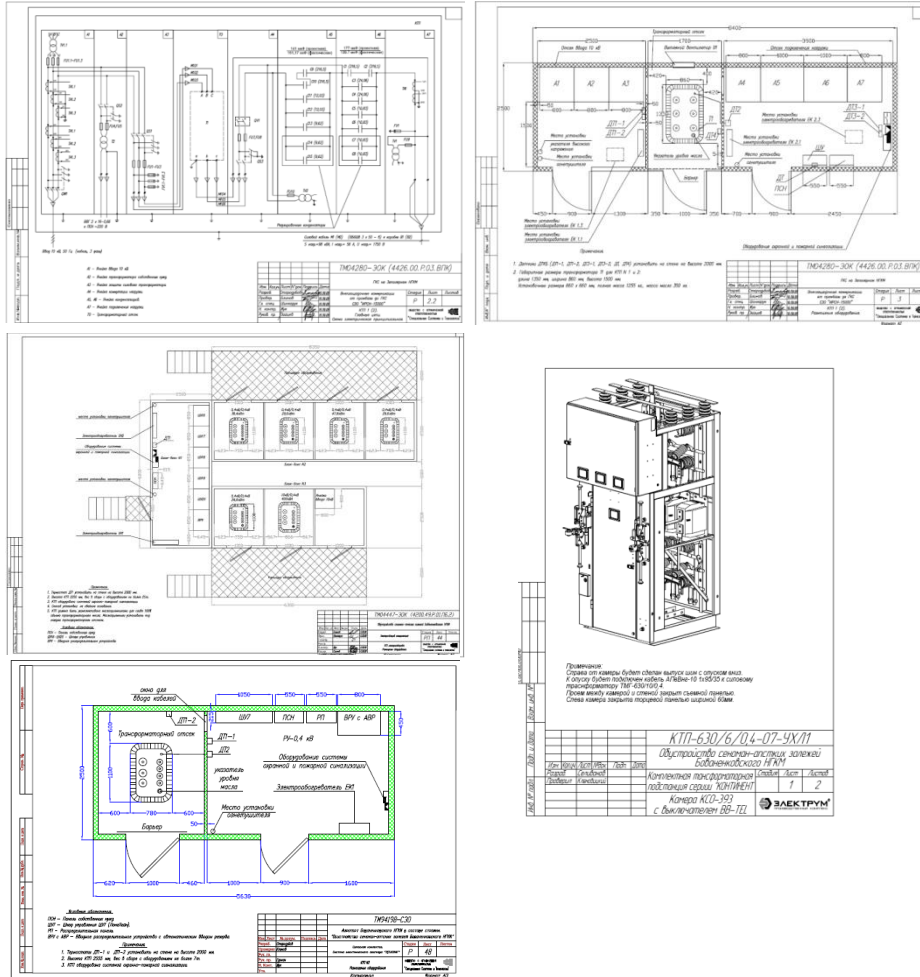
- Effective operation solution for wells with heavy oils
- Continuous oil extraction
- Cost reduction of the well operation
- SST Group proprietary technology

* Including pre-insulated pipelines



We provide **turnkey solutions** in the area of industrial heat tracing:

- Consulting
- Project design
- Manufacturing
- Delivery
- Installation
- Commissioning
- Servicing & post-guarantee service
- 300+ professionals
- 60+ installers (in-house)
- 15000+ industrial heat tracing projects implemented



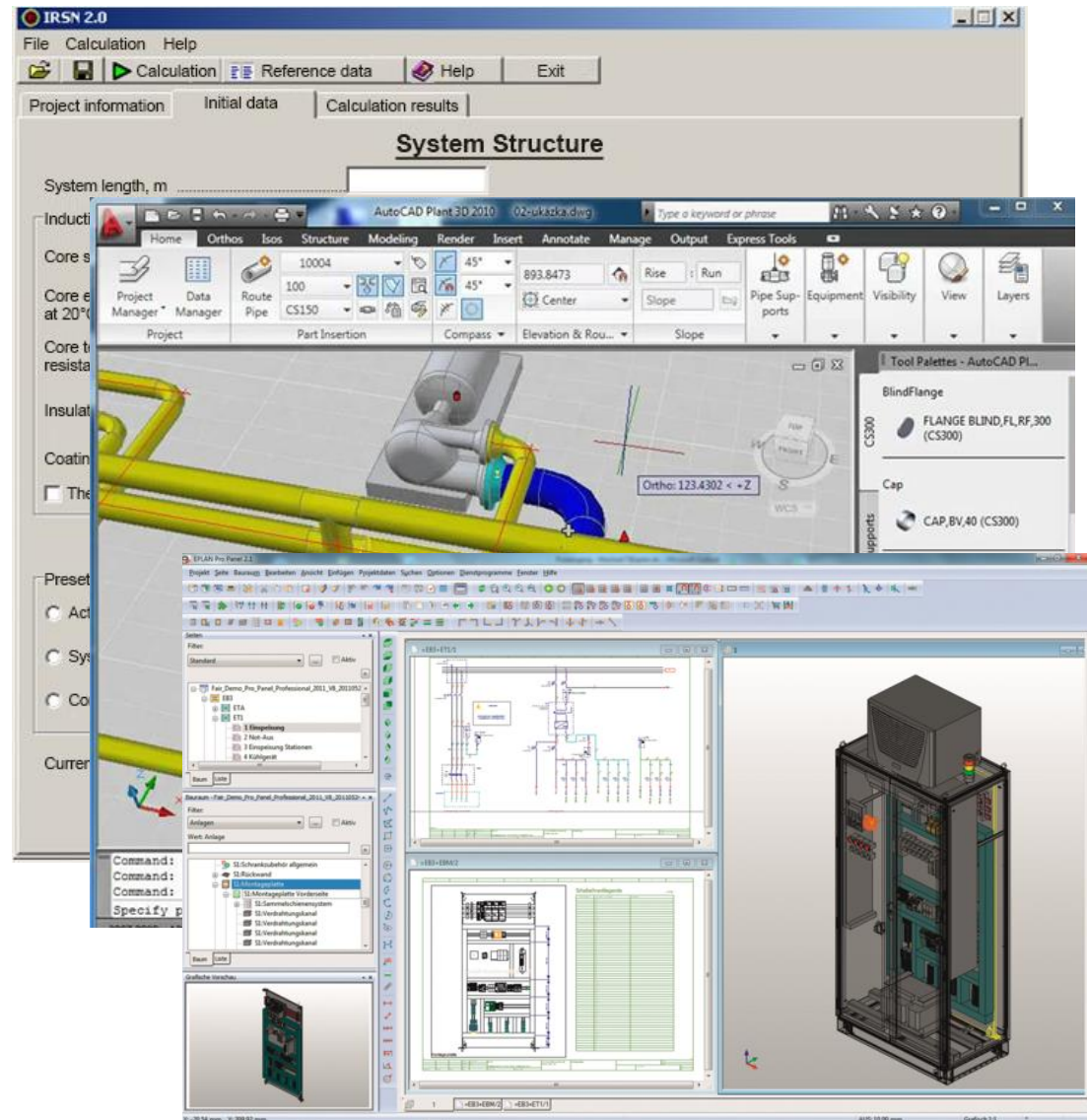
- Own Design Engineering Department
- >100 design engineers
- Detailed design documentation for the equipment, included in the design documentation set for the electric heating system;
- Time-tested technical solutions and designs;
- 15+ year experience

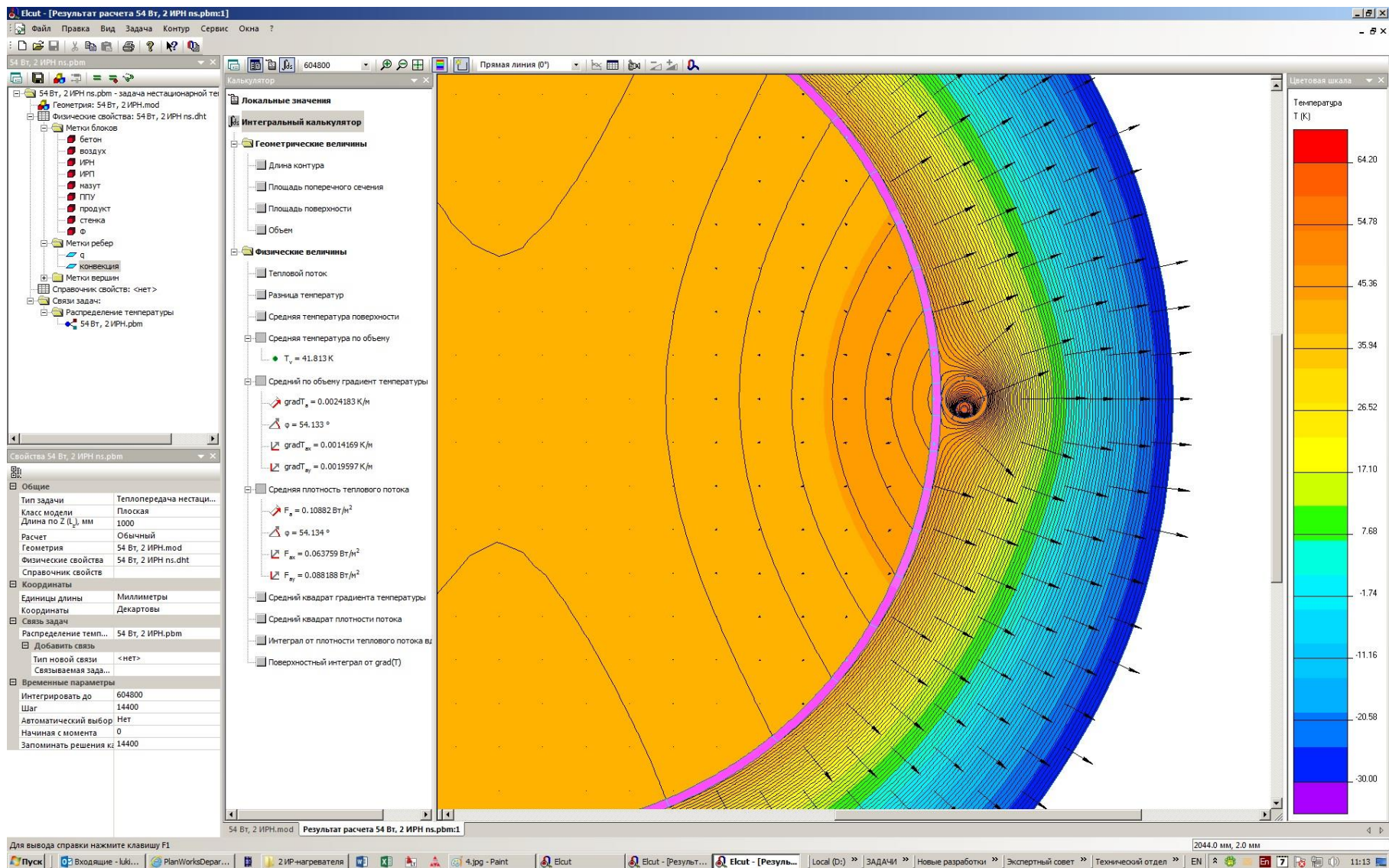
**Over 15 000 projects
designed & implemented
by SST Group**

State-of-the-art software for modelling heat transfer and heat losses:

- IRSN 2.0
- 3D Thermal Design
- AutoCad
- Eplan
- Solidworks

Accurate calculations, with a variety of characteristics of equipment and materials of the skin system individual to each pipeline





Customer: Total Exploration and Production Russia, JSC

Year: 2011

Location: Russia

Facility: 3rd stage of development, Kharyaginsk oil and gas field – “Project Kharyaga-III”

Total pipeline length: 50 km

Number of feeding points: 9 pcs

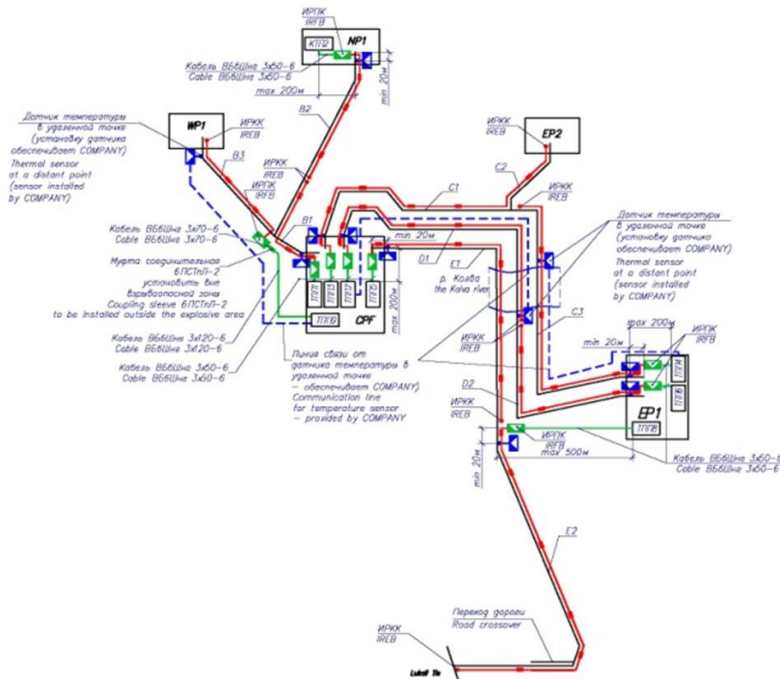
Pipe diameter: 168 and 219 mm

Maintenance temperature: +40 °C (oil), +60°C (water)

Total system output: 1433 kW

Transported product: Water, oil, gas

Heating System Diagram



Customer: Kumho Mitsui Chemicals, Inc.

Year: 2009

Location: Korea

Facility: MNB pipe 15 km line

Total pipeline length: 15 km

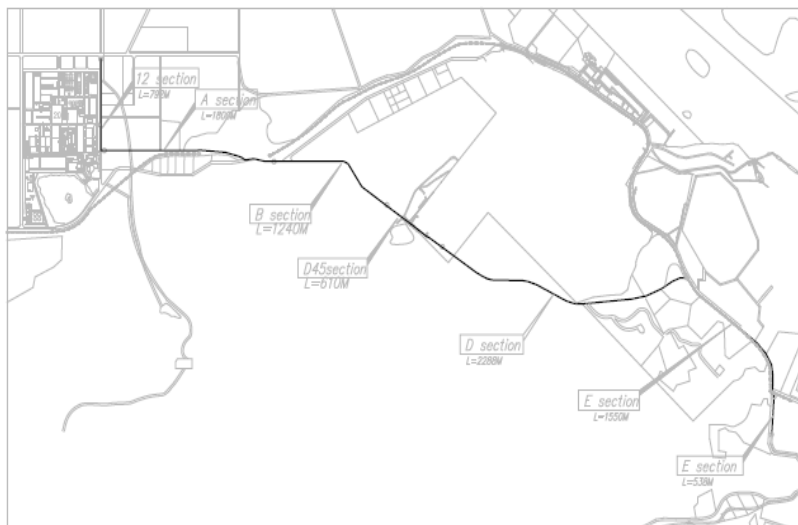
Number of feeding points: 2 pcs

Pipe diameter: 159 mm

Maintenance temperature: +20 °C

Total system output: 488 kW

Transported product: Nitrobenzol



Customer: Gazprom Dobycha Yamburg LLC

Year: 2009

Location: Russia

Facility: 2nd stage of reconstruction,
Yamburg gas and oil field.

Total pipeline length: 135 km

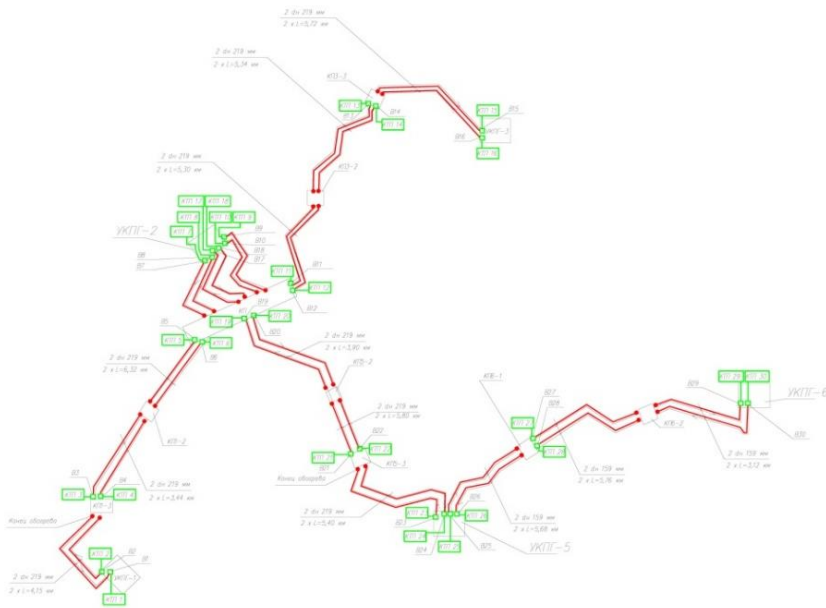
Number of feeding points: 30 pcs

Pipe diameter: 159 and 219 mm

Maintenance temperature: +5 °C

Total system output: 3920 kW

Transported product: Water



Customer: LUKOIL-Western Siberia

Year: 2016

Location: Russia

Facility: Pyakyakhinsky oil field

Total pipeline length: 107 km

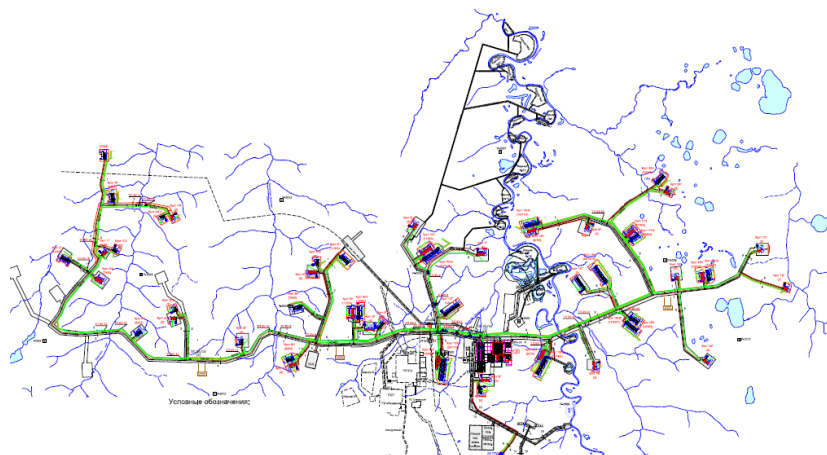
Number of feeding points: 69 pcs

Pipe diameter: 114, 159, 168, 219, 273, 325 mm

Maintenance temperature: +20 °C (water), +25 °C(oil)

Total system output: 4440 kW

Transported product: Oil, water



Customer: LUKOIL-Komi LLC

Year: 2004

Location: Russia

Facility: Yuzhno-Shapkinsk oil and gas field

Total pipeline length: 13 km

Number of feeding points: 6 pcs

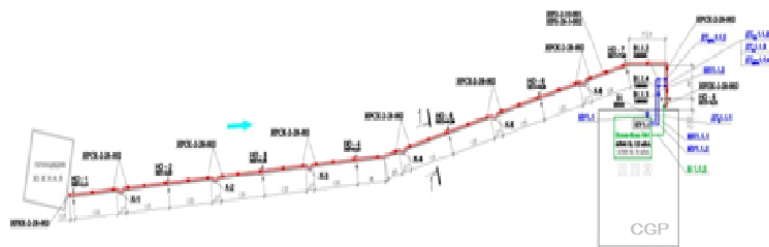
Pipe diameter: 159, 168 and 219 mm

Maintenance temperature: +5 °C

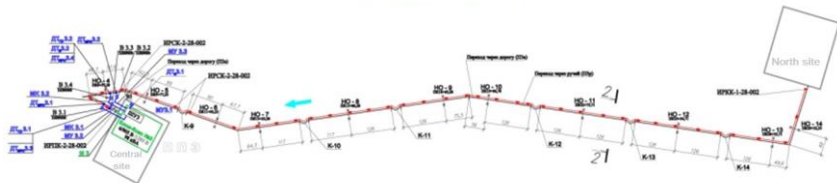
Total system output: 307 kW

Transported product: Water

No 2 Water Pipeline Electric Heating Arrangement Layout
South Production - CGP site



No 6 Water Pipeline Electric Heating Arrangement Layout
Central Production site - North site



Customer: Vostsibneftegaz

Year: 2017

Location: Russia

Facility: Yurubcheno-Tokhomskoye
oil & gas field

Total pipeline length: 72 km

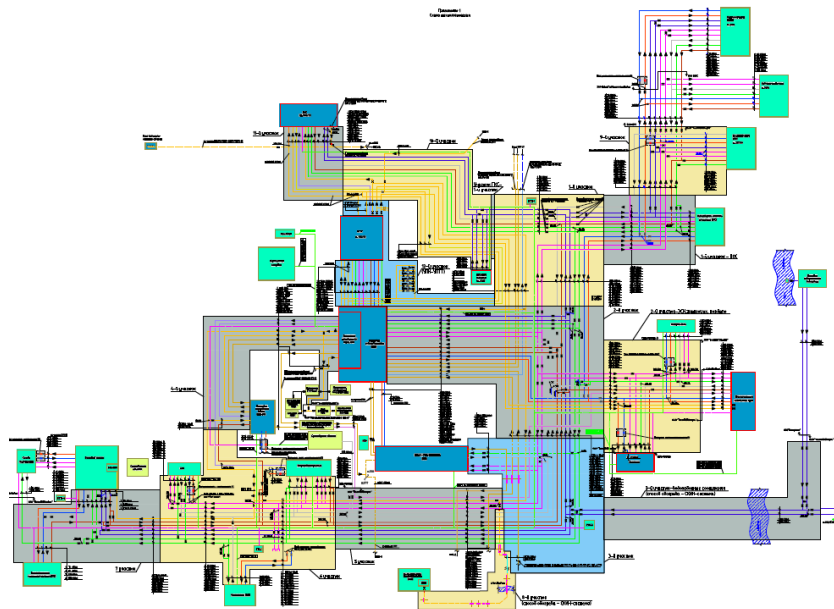
Number of feeding points: 130 pcs

Pipe diameter: 57, 76, 89, 108, 159, 219, 426, 530,
630, 820, 1020, 1220 mm

Maintenance temperature: +5 °C

Total system output: 2523 kW

Transported product: Oil, gas, water



Customer: Gorniy Oil & Gas Company

Year: 2014

Location: Russia

Facility: North-Mukerkamylyskoye oil field, oil pipeline (underground and overground areas)

Total pipeline length: 28 km

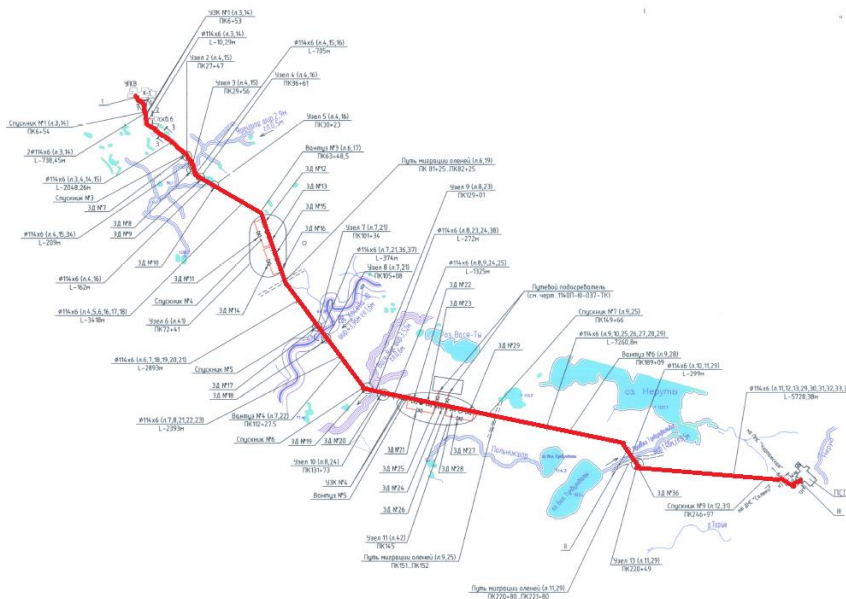
Number of feeding points: 4

Pipe diameter: 114 mm

Maintenance temperature: +20 °C

Total system output: 986 kW

Transported product: Oil



Other Skin-Effect Heat Tracing Projects (1.1)

Customer	Facility	Date	Project	Note
Transneft	Pipeline system «Zapolyarye-OPS «Purpe»	2015	Main oil pumping station No. 1 with LMS.	Skin system of processing pipelines.
LUKOIL	Pyakyakhinskoye field	2015	Construction of the Pyakyakhinskoye field with assignment of area for oil deposits test operation. Processing facilities.	Equipment supply for 16 package transformer substations KTP. Intersite networks stage 1 and 2. Length of heated pipelines equalled to 103 224 m. Skin systems.
Gazprom	Bovanenkovskoye oil-gas condensate field	2014	Airport. Fuel and lubricant storage. Captive power plant.	Intersite communications and process pipeline, total length 210 250 m. Skin systems, total length 63 700 m.
Gazprom	Zapolyarnoye oil-gas condensate field	2014	Complex gas preparation facility UKPG1v. Complex gas preparation facility UKPG2v. Off-site communications between UKPG2v and UKPG2s.	Tanks and sewage water treatment facilities. Processing pipelines, water pipelines and sewerage, total length 152 200 m. Skin system 38 000 m long.
Gazprom	Medvezhye oil-gas condensate field	2013	Gas fields. Complex gas preparation facility UKPG-9. Reconstruction phase 2: GP-6, DKS-6, GP-9, DKS-9.	Skin system 20 000 m long.
NOVATEK	Yarudeiskoye field	2012	Acceptance-delivery station. Oil pipeline.	Intersite networks (Skin system) 3 000 m.
VOPAC Horizon Fujairah Limited	Oil products loading terminal in UAE	2012	Oil products loading terminal/	Pipelines heating (Skin system) 5 000 m.
ALROSA	Hydrosystem on the river «Leindokit»	2010	Sector No. 3 «Residential settlement – Industrial base».	Skin system 20 000 m long.
LUKOIL	Toraveyskoye oil & gas condensate field	2008	High pressure water pipeline.	Skin system 6 500 m long.

Other Skin-Effect Heat Tracing Projects (1.2)

Customer	Facility	Date	Project	Note
LUKOIL	Perevoznaya oil & gas condensate field	2007	Oil and gas collectors.	Skin system of total length of 13 500 m.
Transneft	Oil pipeline Eastern Siberia – Pacific Ocean. (VSTO-I)	2007	Oil pumping station OPS Skovorodino phase 1. Tank farm. Treated water tail drain. Outer water supply networks. Oil pipeline Skovorodino – border of People`s Republic of China.	Processing pipelines, tail drain 3 000 m long. Long-line system 6 000 m long. Skin system 8 000 m long. Thermal insulation.
Rosneft	Vankorskoye field	2007	Oil treatment facility UPN up to tie-in point	Skin system. Oil pipeline 1 315 m long.
Rosneft	Vankorskoye field	2007	Gas treatment facility UPG – BRG2	Skin system. Gas mixture pipeline 3 465 m long.
Rosneft	Vankorskoye field	2007	BRG – KUO	Skin system. Gas mixture pipeline 1 889 m long.
Rosneft	Vankorskoye field	2007	BRG2 – Field support base OBP	Skin system. Gas mixture pipeline 1 145 m long.
Rosneft	Vankorskoye field	2007	Vankorneft, LLC. UPG – Fuel gas preparation unit UPTG	Skin system. Gas mixture pipeline 3 628 m long.
Rosneft	Vankorskoye field	2007	Site of gas pressure reduction unit (BRG-2, BRG-1)	Gas pipelines 2 500 m long.
Rosneft	Vankorskoye field	2006	Sites No. 1, No. 2 of gas producers	Gas pipelines 1 200 m long.
Rosneft	Vankorskoye field	2006	Site of single well VN-9	Processing pipelines 3 000 m long.
Rosneft	Vankorskoye field	2006	Gas treatment facility site of gas supply of oil pumping station OPS-2 of pipeline «Vankor-Purpe». Start-up complex 1	On-site pipelines 2 500 m long. On-site networks 12 500 m long.
LUKOIL	South-Shapkinskoye field	2006	Intersite water delivery mains. Kharyaginskoye field pipeline terminal – South-Shapkinskoye field.	Skin system of total length of 12 500 m. Water pipeline 1 200 m long.
LUKOIL	Tedinskoye oil & gas condensate field	2006	Oil and gas collectors.	Skin system 12 000 m long.

6 Reasons to Work with Us

An orange square containing the text '25 years' in white, with '25' in a large font and 'years' in a smaller font below it.

A quarter century
of experience in
electric heating



World-class products
with international
certificates



Turn-key solutions
from consulting to
maintenance



Recognized, field-
proven technical
solutions



Own development
and production of
different heating
systems



International team
of professionals



Competence Center in Heat Tracing Solutions

