

4 INDUSTRIAL PIPE / SPECIAL PIPE

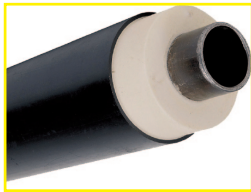
4.1 General

4.1.1	Principle / Heat Insulation / Jacket-Pipe.....	4 / 1
4.1.2	Advantages of preinsulated Industrial Pipes.....	4 / 2
4.1.3	Application areas / References.....	4 / 3-4

4.1 General

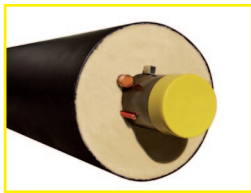
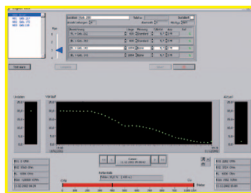
4.1.1 Principle / Heat Insulation / Jacket-Pipe

The prefabricated and preinsulated respectively produced **isoplus industrial-pipes** are based on an experience of 35 years of the **isoplus**-group in the energy sector of district heat supply. In order to reach the highest degree of efficiency and most effective information, the industrial requirements will be arranged exclusively by a central business unit **isoplus-industry** (e-mail: industrie@isoplus.de) located in Germany.



Due to the variety of the available pipe qualities it will be possible to construct the suitable prefabricated and preinsulated pipe system, for nearly every kind of application respectively for every medium. The range of application includes sewage-, climate- and ventilation equipment, as well as district cooling, biomass equipment, oil- and district gas supply, ship- and oil-platform constructions up to aggressive solvents and acids containing, chemical laboratory liquids.

isoplus industrial-pipes consist of three components **carrier pipe + insulation + jacket-pipe**. This simple unit construction system will guarantee an unlimited variety of combinations. **isoplus** is constructing prefabricated insulated rigid and flexible jacket-pipes, rigid sheet metal- and steel-jacket pipes with PEHD- or SPIRO-jacket-pipe.



Of course it will be possible to integrate a leak detecting system like **IPS-Cu** or **IPS-NiCr** or/and a fully automatic control and detecting-technology **IPS-Digital** into the industrial pipes. At all steel pipes a profile pipe can be provided for connection free assembling and in order to install an attending trace later on. This may be used as heat tracing, for constant temperature system or for frost-protection. Alternatively it will be possible to fix a heat tracing directly at the carrier pipe.

4.1.2 Advantages of preinsulated Industrial Pipes

The essential advantages of preinsulated industrial pipes

- ⇒ reduced weight of pipe
- ⇒ no corrosion from outside
- ⇒ long term corrosion protection
- ⇒ effectively avoided environment emissions
- ⇒ space saving small jacket-pipe dimensions
- ⇒ no moisture penetration at the pipe clamps
- ⇒ no cold- or heat transition at the pipe clamps
- ⇒ definite improved energy loss due to PUR-foam
- ⇒ high sound protection respectively sound values
- ⇒ pipe clamps will be required only at the jacket-pipe
- ⇒ frames are only required at the seams of the pipes
- ⇒ minimum life-time of 30 years, according to EN 253
- ⇒ complete product range incl. accessories and fittings
- ⇒ essential reduced conductivity of the insulation material
- ⇒ easy cleaning by use of high pressure steam aggregate
- ⇒ pressure resistant PE-jacket, spiro-jacket or steel-jacket
- ⇒ most various thermal resistance of - 30° up to + 400° C
- ⇒ 100 % water tight PE-jacket-pipes and connection couplers
- ⇒ certified Quality Management according to DIN EN ISO 9001
- ⇒ practically no maintenance intervals, low expenditure of maintenance
- ⇒ resistant jacket-pipe against chemicals-, UV-, salt and exhaust fumes
- ⇒ mechanical extremely stable and therefore passable pipe construction
- ⇒ reduced insulation thickness, i.e. compared to heat equipment prescription
- ⇒ very short assembling periods due to installation and insulation in one working step

The right pipeline for every application



PEHD-jacket-pipe rigid

Single pipe DN 20 to DN 1000
 Double pipe DN 20 to DN 200
 Temperatures min. acc. to EN 253
 Pressure stages up to PN 25



PELD-jacket-pipe flexible

Single pipe DN 20 to DN 125
 Double pipe DN 20 to DN 50
 Temperatures -20 °C to
 +95 °C / +130 °C
 Pressure stages up to PN 25



Spirofalz-jacket-pipe

DN 20 to DN 1000
 Temperatures min. acc. to EN 253
 Pressure stages up to PN 25



Steel-jacket-pipe

DN 25 to DN 1200
 temperature -30 °C to +400 °C
 Pressure stages up to PN 64

4 INDUSTRIAL PIPE / SPECIAL PIPE

4.1 General

4.1.3 Application areas / References

isoplus industrial-pipes will be used among others for the following applications:

- ⇒ Acid containing
- ⇒ Acids
- ⇒ Gas pipelines
- ⇒ Air condition technology
- ⇒ Air-technology
- ⇒ Alcoholic Industry
- ⇒ Ballast water
- ⇒ Bath- finishing-equipment
- ⇒ Beer
- ⇒ Bio-gas
- ⇒ Biomass heat equipment
- ⇒ Canalisation
- ⇒ Chemical industry
- ⇒ Chemicals
- ⇒ Chilled water
- ⇒ Chocolate
- ⇒ Circulation
- ⇒ Cleaning equipment
- ⇒ Cold methods
- ⇒ Coldness
- ⇒ Combined heat power plants
- ⇒ Combustion exhaust fumes
- ⇒ condense
- ⇒ Cooking plant
- ⇒ Cooling
- ⇒ District cooling
- ⇒ District gas
- ⇒ District heating
- ⇒ Dump-drainage
- ⇒ Exhaust fumes
- ⇒ Faeces
- ⇒ Fertiliser
- ⇒ Fire-fighting equipment
- ⇒ Flammable liquids
- ⇒ Fodder
- ⇒ Food stuff industry
- ⇒ Fuel
- ⇒ Regeneration equipment
- ⇒ Geothermal
- ⇒ Glycol
- ⇒ Heat-carrier-oil
- ⇒ Heating equipment
- ⇒ Heavy oil-/thermal oil
- ⇒ High pressure steam
- ⇒ Hot air
- ⇒ Hot water
- ⇒ Hydrochloride acid
- ⇒ Ice-water
- ⇒ Industrial cold water
- ⇒ Industrial water
- ⇒ Kerosene
- ⇒ Laboratory liquids
- ⇒ Lawn heating
- ⇒ Liquid food stuff
- ⇒ Low pressure steam
- ⇒ Mash i.e. mustard
- ⇒ Mineral water
- ⇒ Mining
- ⇒ Natural gas
- ⇒ Offshore-platform
- ⇒ Oil-transport
- ⇒ Paper industry
- ⇒ Patrol
- ⇒ Petroleum
- ⇒ Potable water
- ⇒ Power plant water
- ⇒ Pressure air
- ⇒ Printing industry
- ⇒ Pure gas
- ⇒ Rain water
- ⇒ Refinery
- ⇒ Air condition cold water
- ⇒ Roof-drainage
- ⇒ Run-way-heating
- ⇒ Sanitary equipment
- ⇒ Sea-water
- ⇒ Sea-water desalination
- ⇒ Seep-water
- ⇒ Sewage
- ⇒ Sewage plant
- ⇒ Ship-building
- ⇒ Smoke-gas cleaning
- ⇒ Solar systems
- ⇒ Solar-collectors
- ⇒ Solvents
- ⇒ Soot water
- ⇒ Staining equipment
- ⇒ Steam
- ⇒ Storage water
- ⇒ Sugar industry
- ⇒ Sulphuric acid
- ⇒ Synthetic fibre industry
- ⇒ Textile-industry
- ⇒ Thermal water
- ⇒ Treacle
- ⇒ Underwater pipeline
- ⇒ Ventilation
- ⇒ Warm water
- ⇒ Washing equipment
- ⇒ Waste air
- ⇒ Waste treatment
- ⇒ Water
- ⇒ Wet-oil
- ⇒ and so on

In case that your special application should not be mentioned above, please call us or send an e-mail to industrie@isoplus.de.

Or fill in the following lines and send this page to Fax-No.: +49 (0) 36 32 / 65 16 - 16.

Name / Company: (stamp)		Contact person:	
		Street:	
		Post code / City:	
		Telephone:	
e-mail:		Facsimile:	
internet:		Date:	
remark resp. Application:			

References (Extract from ≥ 300 m; $\Sigma = 52$ km)

Project / City / Remark	Country	Application	Pipe Material			Dimension from / to in DN	Length in km
			IR	Dä	MR		
AMD Dresden; incl. Epoxy resin-coating	GER	Chilled water	St	PUR	ALF	600	0,42
Barracks Amberg	GER	Potable water	Es1	PUR	PEH	80 - 40	0,50
BASF airport Munich	GER	Pipe-bridge	St	PUR	SPF	250	0,50
Basin Leuna	GER	Condense	Es2	PUR	ALF	400	1,30
Bayer AG Antwerpen; incl. corrosion protection	B	Process water	St	PUR	ALF	80	0,76
Cityhall Potsdam	GER	Sanitary	Cuh	PUR	PEH	15 - 32	0,70
Congress-Centre Hannover	GER	Coldness	St	PUR	SPF	100 - 200	0,40
Dairy Erfurt	GER	Steam	St	MW	St	200	1,50
Degussa AG Wesseling	GER	Acid	Es2	PUR	ALF	40 - 50	0,50
Deusa International GmbH Kehmstedt	GER	Salt water	St	PUR	SPF	100 - 300	1,58
Dueker construction Rhine Harbour Karlsruhe	GER	District heating	St	PUR	PEH	500	0,30
Federal Armed Forces Königsbrück	GER	Heating	PVC	PUR	PEH	25 - 100	0,80
Flower hyper-market Straelen	GER	Coldness	Es1	PUR	PEH	50 - 300	1,50
Flower market Heerenveen	NED	Coldness	Es1	PUR	PEH	300	1,60
Greppin; incl. 2 pipe inserts high grade steel	GER	Ground water	St	PUR	SPF	125	0,60
GSF Neuherberg	GER	Coldness	PEH	PUR	PEH	100 - 250	0,80
Haag	AUT	Sewage	GFK	PUR	PEH	25 - 100	2,90
High way tunnel Allach; SPF = stainless steel	GER	Fire exting water	PEH	PUR	SPF	80 - 200	6,30
High way tunnel Thuringia	GER	Fire exting water	Cast St.	PUR	PEH	150	2,75
IBM Mainz; incl. pipe insert; SPF = stainless st.	GER	Process water	St	PUR	SPF	200	0,30
Invest Timisoara	RO	Bio-gas	St	PUR	SPF	100	1,20
Local heat supply Straubing	GER	Thermal water	PEH	PUR	PEH	50 - 200	2,48
Malt factory Erfurt	GER	Steam	St	MW	St	200	1,00
Meat production Eberswalde; incl. Epoxy resin-c.	GER	Coldness	St	PUR	SPF	20 - 125	0,62
Metallica Oradea	RO	Water	St	PUR	SPF	200	0,50
Mineral water Staffelstein	GER	Brine water	PP	PUR	PEH	40	0,30
New exhibition Friedrichshafen	GER	Potable water	PEH	PUR	PEH	40 - 100	1,00
Northwest-Circle Zurich; MR = SPF + PEH	SUI	Sewage	Cast	PUR	SPF	200	3,00
Orga Flintbek	GER	District cooling	PEH	PUR	PEH	250 - 350	0,42
Philip Morris Kasachstan	KAZ	Oil	St	PUR	PEH	200	3,20
Pipeline at Motorway 4 Bautzen	GER	District heating	St	MW	St	400	2,50
Rennsteig-Tunnel Zella-Mehlis	GER	Fire exting water	Cast	PUR	PEH	150	2,80
Reutlingen	GER	Cooling water	St	PUR	SPF	100 - 250	0,41
RWE-Power plant Hürth	GER	Transportation	St	PUR	SPF	200	0,70
Speed-course VW Wolfsburg; Dä = PUR + MW	GER	Heat 180°	St	MW	PEH	65 - 80	0,30
Tar disposal Rositz	GER	Tar	St	PUR	SPF	150	1,00
Tar-mud treatment Rositz	GER	Tar-mud	Es2	PUR	St	150	0,30
Telecommunication school Feldafing	GER	Heating	Es1	PUR	PEH	20 - 65	2,60
Wagon construction Görlitz	GER	District heating	St	MW	St	250	1,00
Wesseling; incl. surface treatment	GER	Acid	St	PUR	ALF	40 - 50	0,51

IR = Inside- resp. medium pipe

Dä = Insulation material

MR = Jacket- resp. outside-pipe

St = Steel black, i. e. P235GH

Cuh = Copper Pipe, hard R 290

Es1 = Stainless steel pipe, material 1.4301 (V2A)

Es2 = Stainless steel pipe, material 1.4571 (V4A)

GFK = Reinforced fibre glass plastic

PEH = Polyethylene High Density, PEHD

PP = Polypropylene

MW = Mineral-wool-fibre-shell

PUR = Polyurethane-hard foam

SPF = Galvanised Spiro-pipe

ALF = Aluminium-fold-pipe