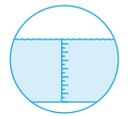


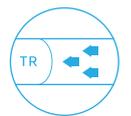
2 offshore lines



2,200 metres  
maximum depth



930 km per line



31.5 billion cubic  
metres transport  
capacity per year

## The TurkStream Gas Pipeline

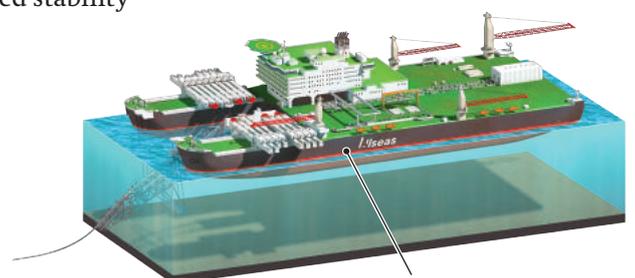
TurkStream will directly connect the large gas reserves in Russia to the Turkish gas transportation network, to provide reliable energy supplies for Turkey, South and Southeast Europe. The offshore component of TurkStream Pipeline is developed and constructed by South Stream Transport B.V., based in Amsterdam, The Netherlands. The offshore pipeline consists of two parallel pipelines running through the Black Sea.

Both offshore pipelines start near Anapa, on the Russian coast, and land on the Turkish coast near Kiyikoy, at a distance of 100 kilometres to Istanbul. Of the two onshore pipelines, BOTAS develops the first line in Turkey, which will connect to the Turkish network at Lüleburgaz. The second onshore line, which runs towards the Turkish-European border, is realized jointly by Gazprom and BOTAS.

## Constructing the Offshore Pipeline

When complete, each line will be capable of delivering 15.75 billion cubic metres of gas per year. A single line is constructed from thousands of individual pipe joints. Each of these pipe joints has an external diameter of about 81 cm and weighs around 9 tonnes. The walls of the pipeline are made up of almost four centimetres of high-quality carbon manganese steel. Pipes laid closer to the shore are coated in concrete for added stability and protection against marine activities.

The pipes are welded together on board specialized pipelaying vessels. Each weld is scanned with ultra-sound, which helps detect even the tiniest defects in the welding joint. After the joints are coated for protection against corrosion, the vessel moves forward and the pipe is lowered onto the seabed.



Pioneering Spirit pipe-laying vessel

# The TurkStream Offshore Pipeline in Numbers

**31.5 bcm** capacity, **15.75 bcm** per line

**2 lines**, each over **900 km** in length

Laid at depths of **2,200 metres**

**12 metre pipe-joints** make up each pipeline

- 81 cm external diameter
- 9 tonnes weight
- 4 cm wall thickness

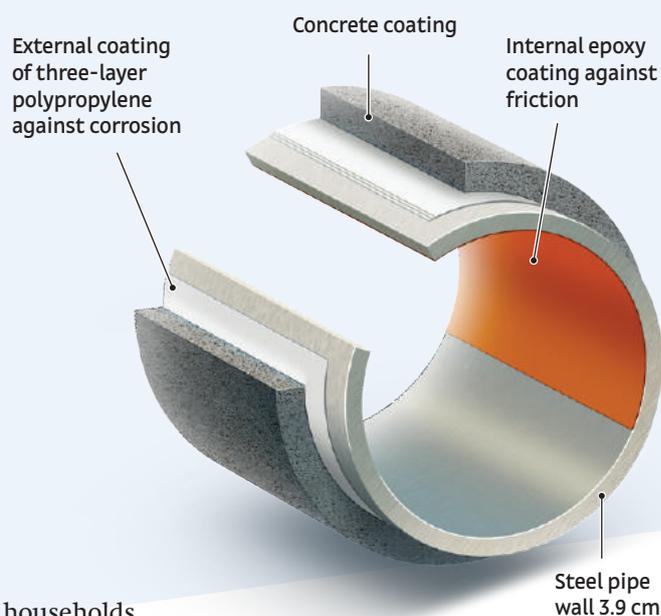
Over **75,000 pipes** used per line

**300 bar** internal design pressure

**284 bar** maximum operating pressure

TurkStream will supply energy equivalent to:

- The energy consumed by 15 million European households
- The power capacity of nearly 126,000 wind turbines
- The amount of gas delivered by almost 370 LNG tankers



Pipes laid in shallow waters are coated with 5 to 8 centimetres of concrete for additional stability

## The first large-diameter offshore pipeline laid at over 2 km deep

Pipeline	Max. depth (m)	Diameter (cm)	Region
Franpipe	70	110	North Sea
Nord Stream	210	122	Baltic Sea
Langeled	360	112	North Sea
Maghreb-Europe Pipeline	400	56	Mediterranean Sea
Trans-Mediterranean Pipeline	610	59	Mediterranean Sea
Greenstream	1150	81	Mediterranean Sea
Bluestream	2150	61	Black Sea
Medgaz	2160	61	Mediterranean Sea
<b>TurkStream</b>	<b>2200</b>	<b>81</b>	<b>Black Sea</b>
Perdido Norte	2530	46	Gulf of Mexico