Technical proposal No.

Liner hanger PH-273R1-02

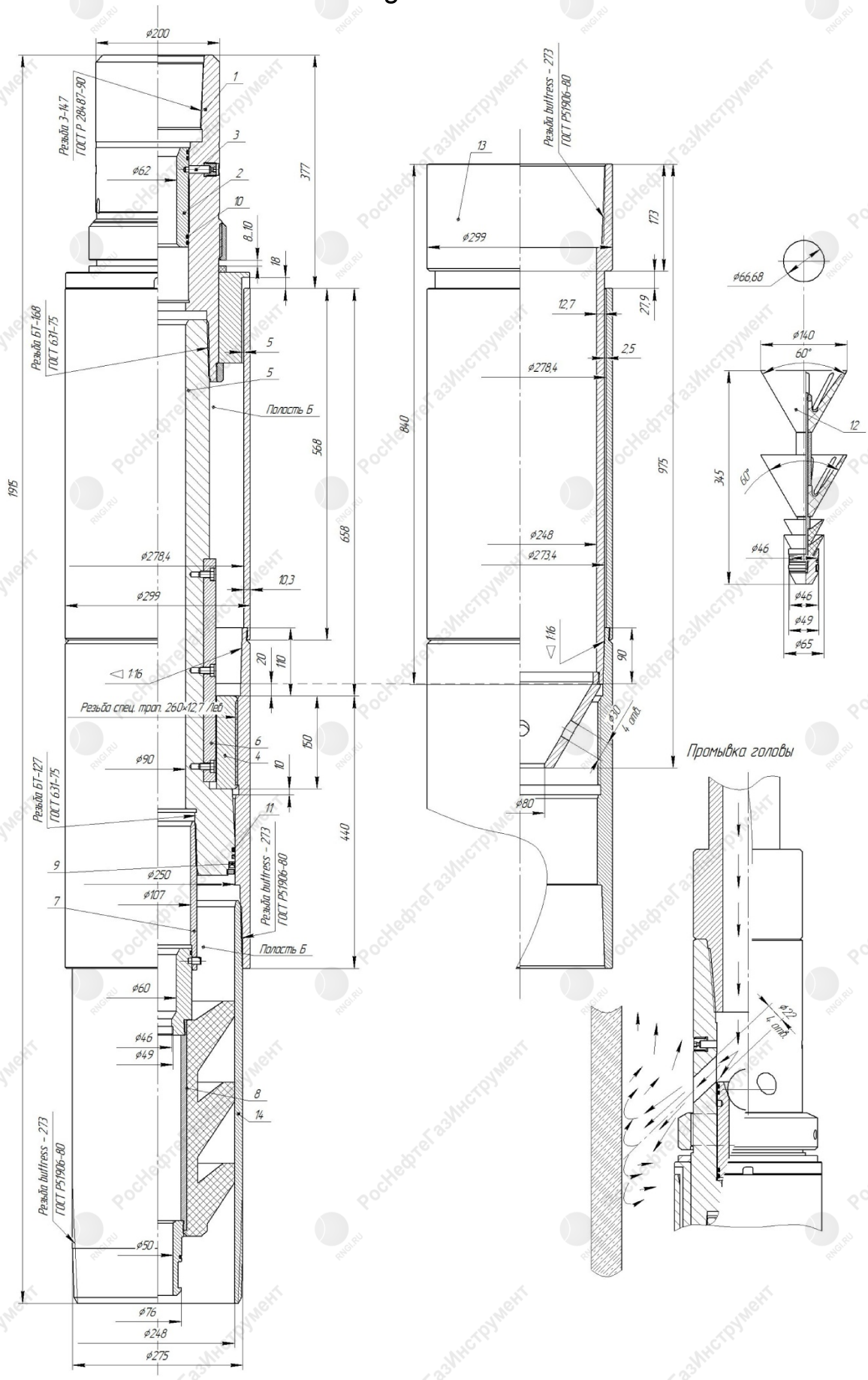

Fig. 1

The liner hanger is designed for lowering the "liners" (secret columns) of casing pipes Ø 273 mm and their cementing during the construction of oil and gas wells. Back off the hanger with rotation "to the right" 11-12 rotations.

The liner hanger includes (Fig. 1):
1-body; 2-seat bushing; 3-breaking pins, 4-coupling; 5-stem; 6 - slider; 7-subcoupling; 8-displacement plug; 9-sealing cup (made of high-temperature rubber up to +200^0 C); 10,11 - O-rings GOST 98833-73/GOST 18829-73 (made of high-temperature rubber up to +200^0 C); 12- discharge plug; 13-male hub, 14 - nozzle.

Materials:
Steel 40X GOST 4543-71, incl. indicated in table 1;

Table 1

Part name	Pos. in fig. 1	Material	HRC hardness, max.	Yield point, $\sigma_т$, MPa
Body	1	40X GOST 4543-71	32…36HRC$_э$	750
Coupling	4	40X GOST 4543-71	28…32HRC$_э$	650
Male hub	13	40X GOST 4543-71	32…36HRC$_э$	750
Nozzle	14	40X GOST 4543-71	32…36HRC$_э$	750

Aluminum alloy D16;
High-temperature rubber RK-1802;
B cavity, filed with the lubricant TOMFLON SCM 200 (0...+200^0 C) (TS 0254-012-76643964-05).

Technical characteristics:

Working pressure, max. 15 MPa
External excess pressure, max. 11,5 MPa;
Internal excess pressure, max. 17,25 MPa;
Cargo capacity, max. 200 tons;
Working temperature, max. +200 ºC;
Pressure of the discharge plug pin cut: 40 - 50 atm.
Pressure of the cut of pins of the plug for opening the "windows": 80 - 100 atm.