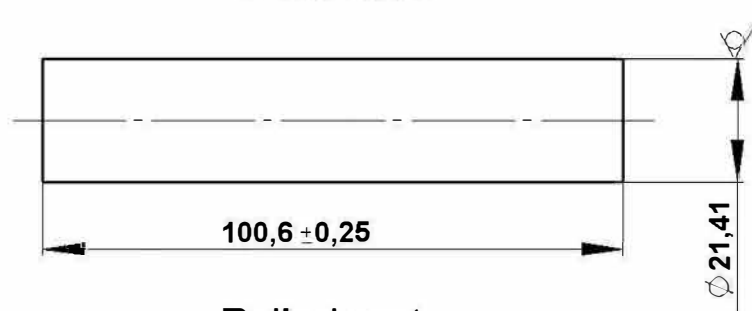


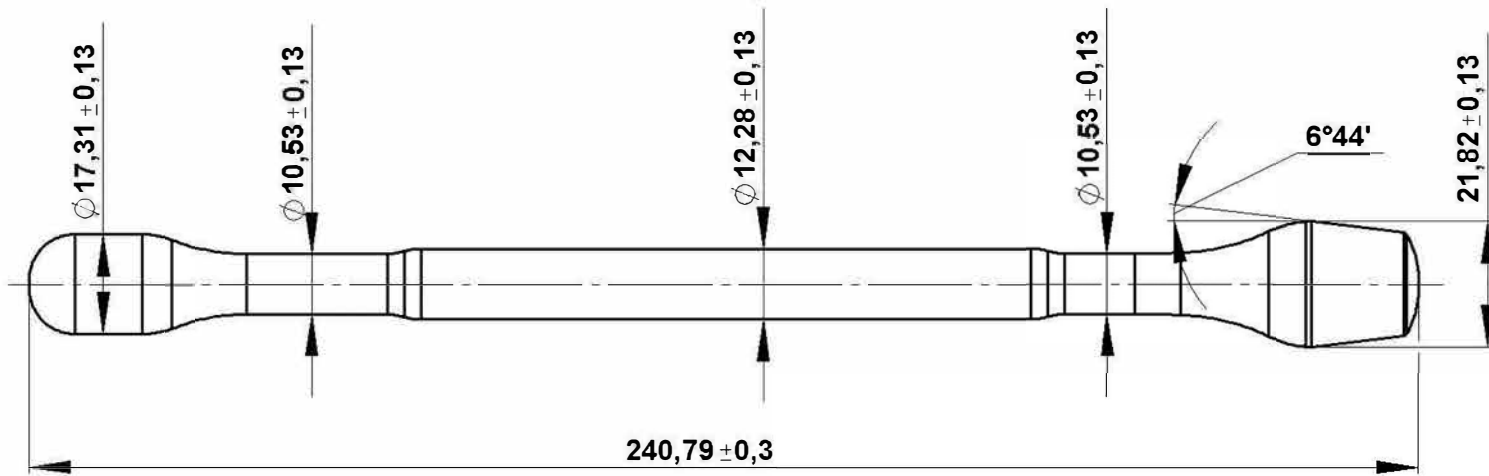
- Catalog preform production **FLAT CROSS-WEDGE ROLLING WRL** and **WRL TS** series line
- Catalog preform production **THREE-ROLL HELICAL ROLLING HRL** series line



Initial billet



Rolled part



CWR machine type:

Die length, mm:

Output production, pcs/h:

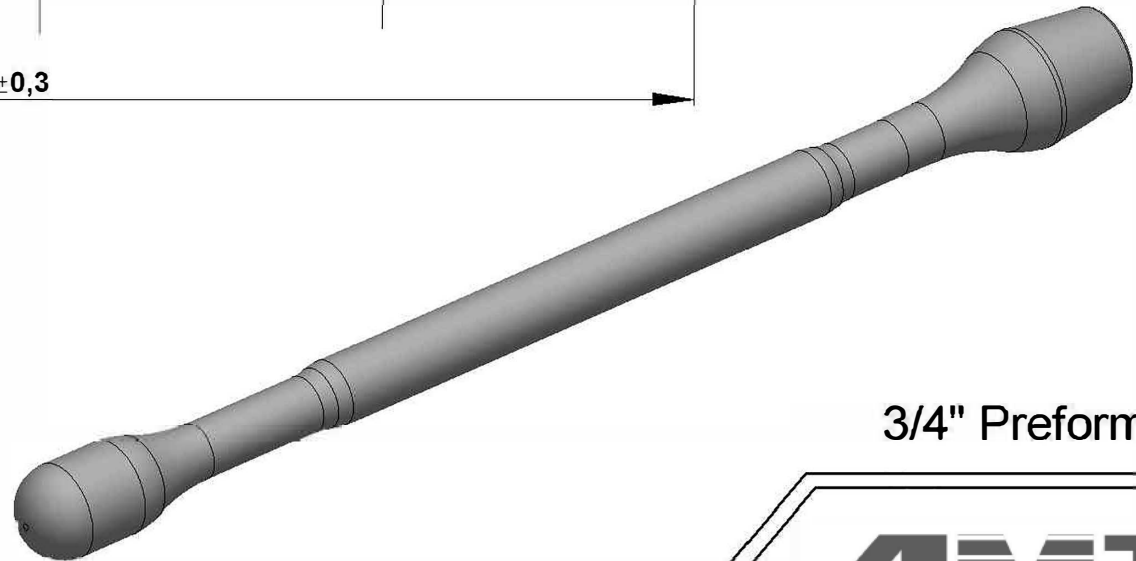
Heater Installed capacity, kw.:

Temperature of rolling, ° C:

	Russia	Germany	USA
Material	GOST 1050	DIN	ASTM A322
steel:	45	1.6546	94B30

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,50...0,80%

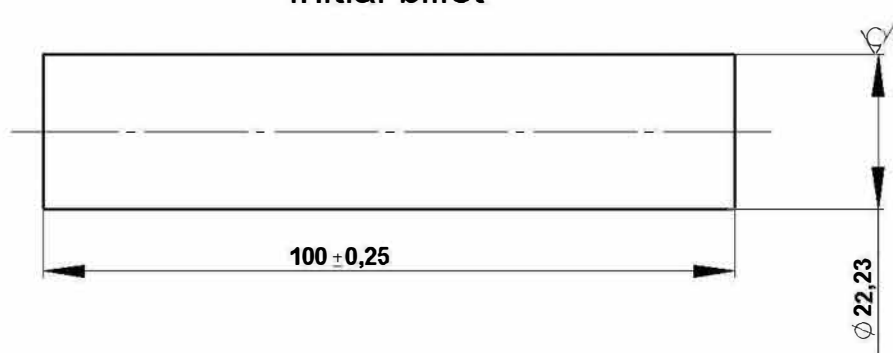
Cr - 0,25% max Ni - 0,25% max Cu 0,25% max As - 0,08% max



3/4" Preform



Initial billet



CWR machine type:

Die length, mm:

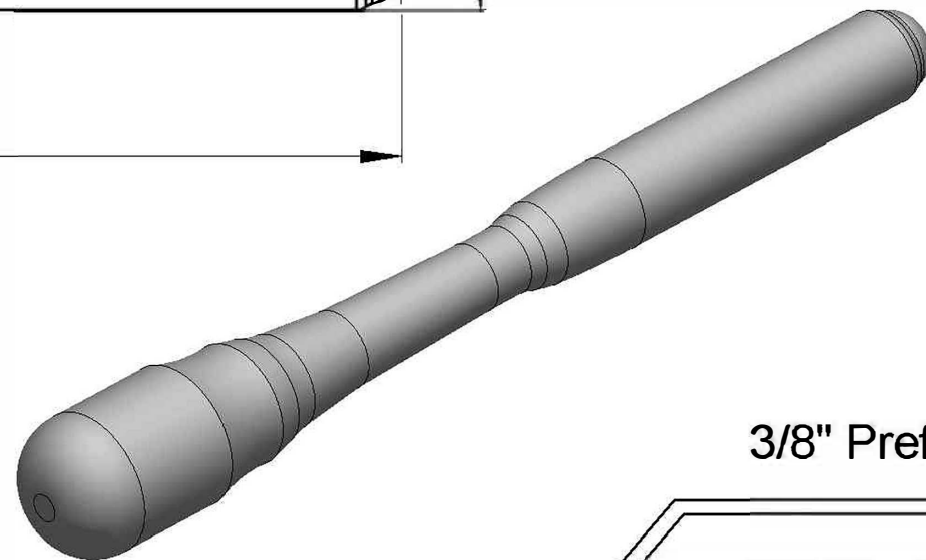
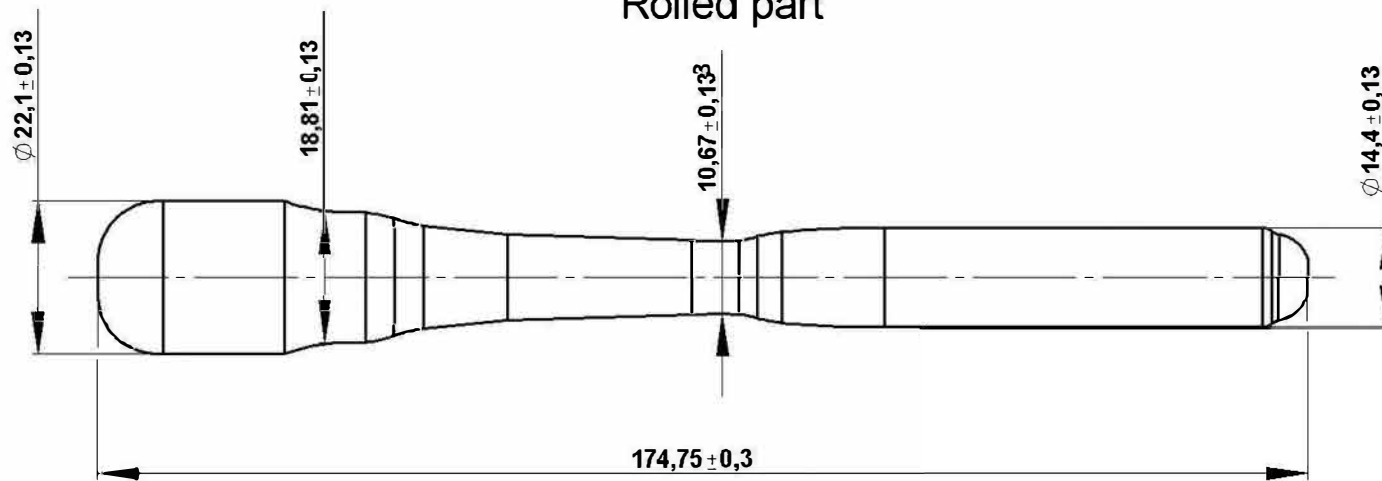
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, ° C:

6,3 / (✓)

Rolled part



3/8" Preform

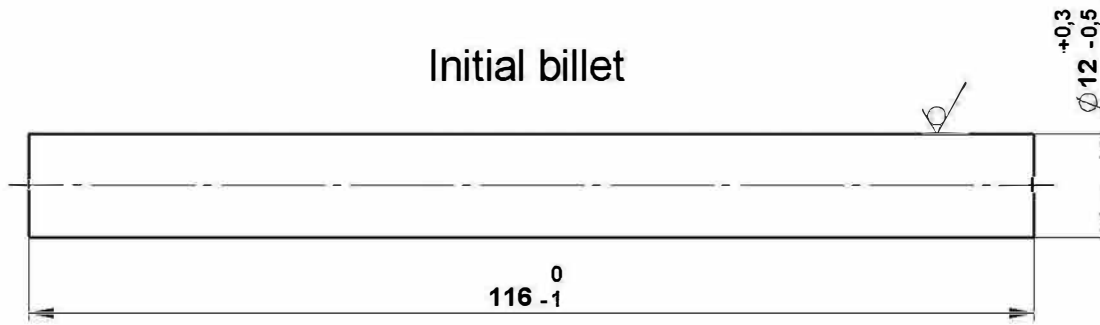
	Russia	Germany	USA
Material steel:	GOST 1050	DIN	ASTM A322
	45	1.6546	94B30

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,50...0,80%

Cr - 0,25% max Ni - 0,25% max Cu 0,25% max As - 0,08% max

AMT
ENGINEERING

Initial billet



CWR machine type:

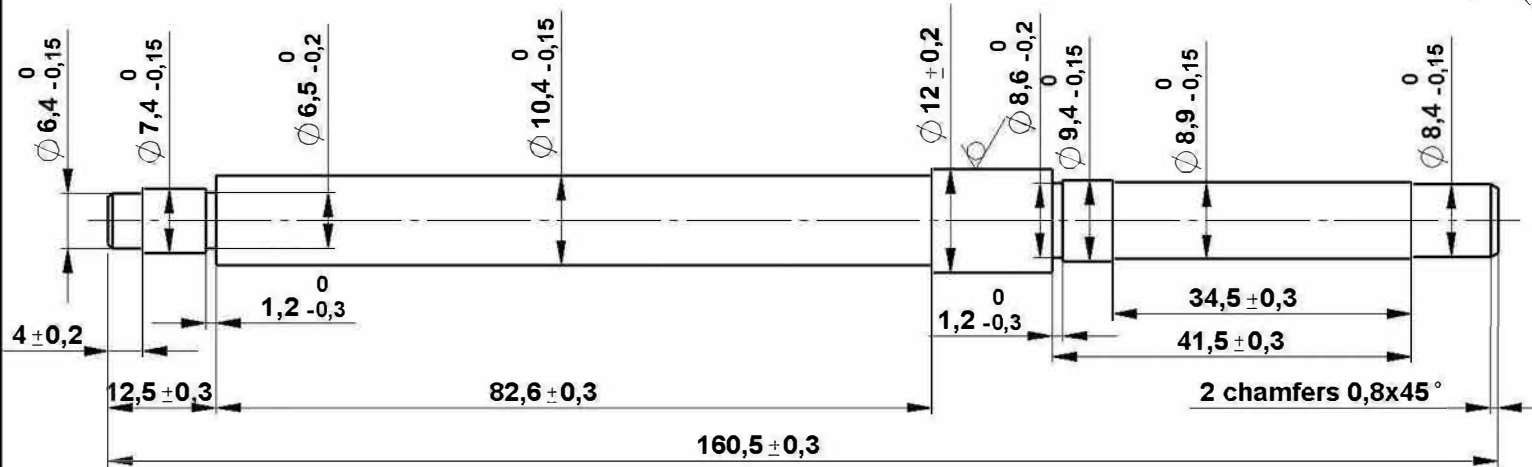
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part

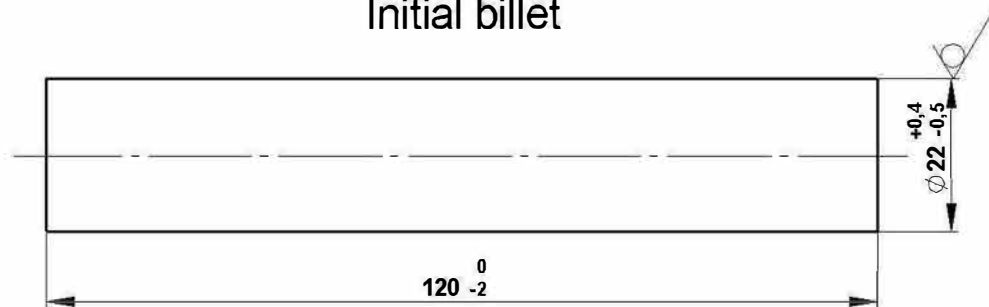


Axle

Material steel:	Russia	Germany	USA
	GOST 1050	DIN	ASTM A322
	45	1.6546	94B30

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,50...0,80% Mo - 0,15...0,25%
 Cr - 0,25% max Ni - 0,25% max Cu 0,25% max As - 0,08% max

Initial billet



CWR machine type:

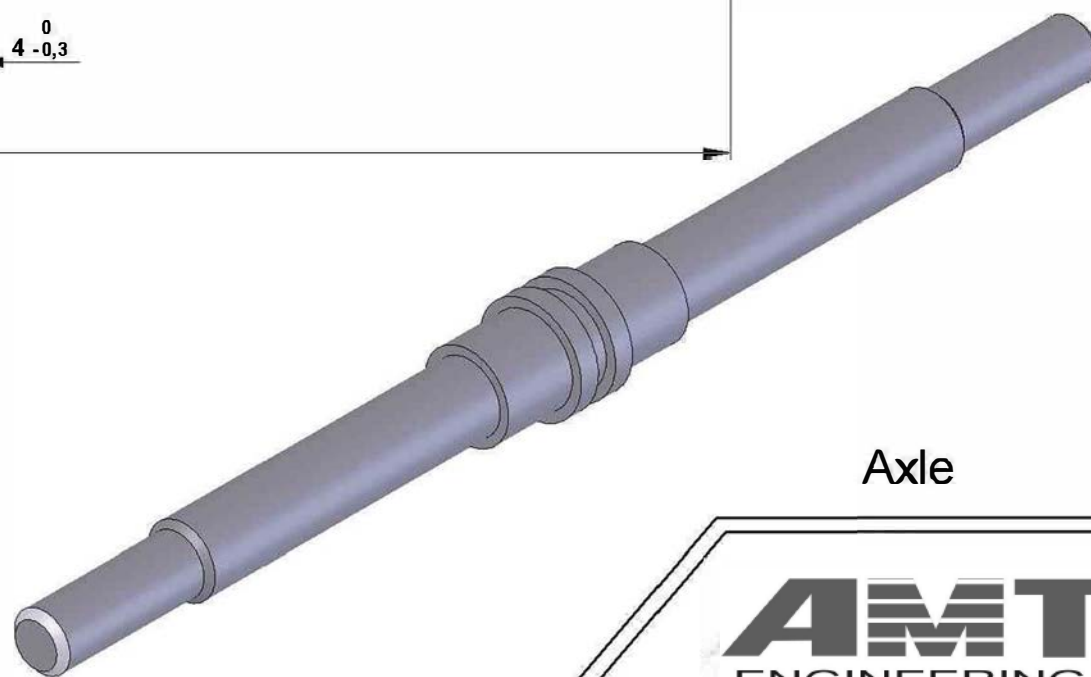
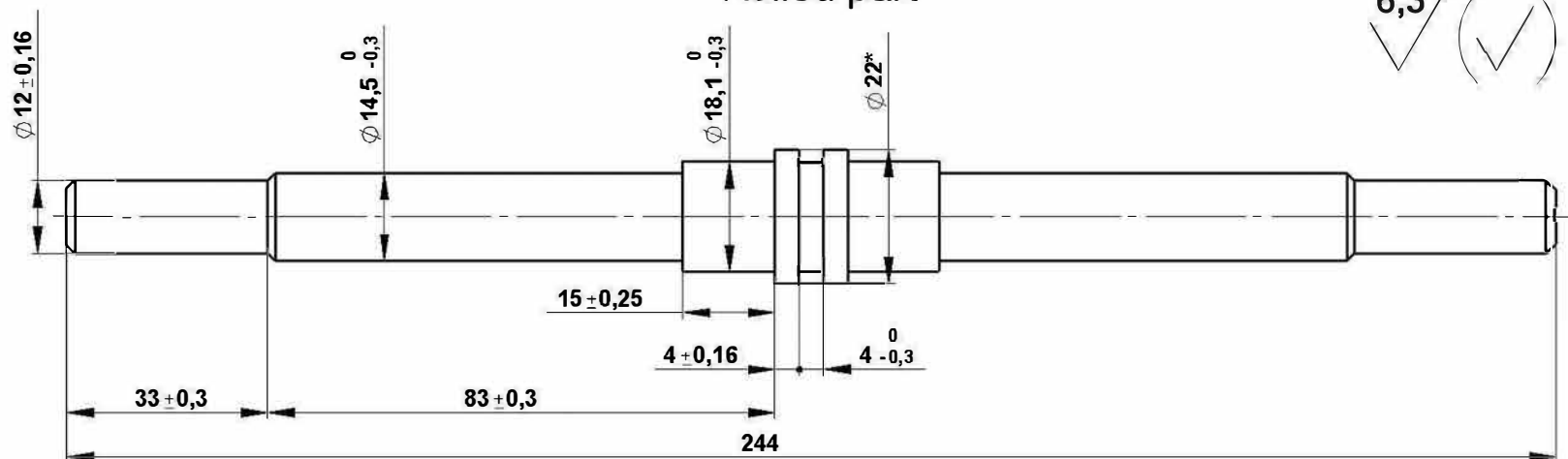
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part



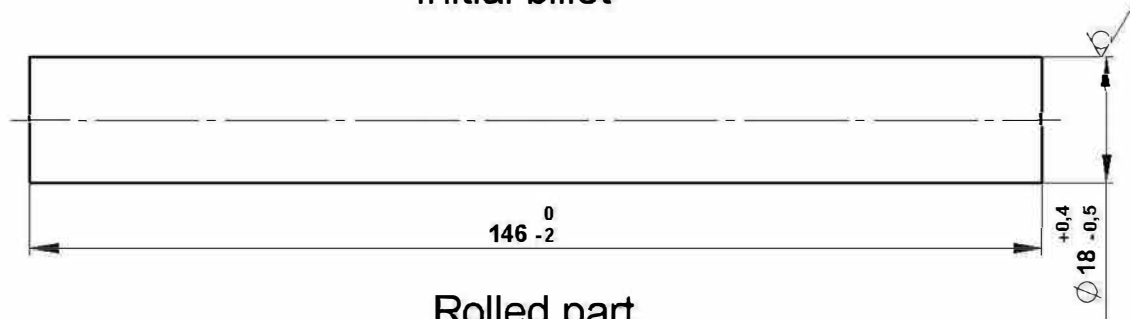
Axle

	Russia	Germany	USA
Material	GOST 4543	DIN	ASTM A646
steel:	30ChMA	1.7264	4130

C - 0,26...0,33% Si - 0,17...0,37% Mn - 0,80...1,10% Mo 0,15...0,25%
 Cr - 0,80...1,10% Ni - 0,30 max% Cu - 0,30%max



Initial billet



CWR machine type: _____

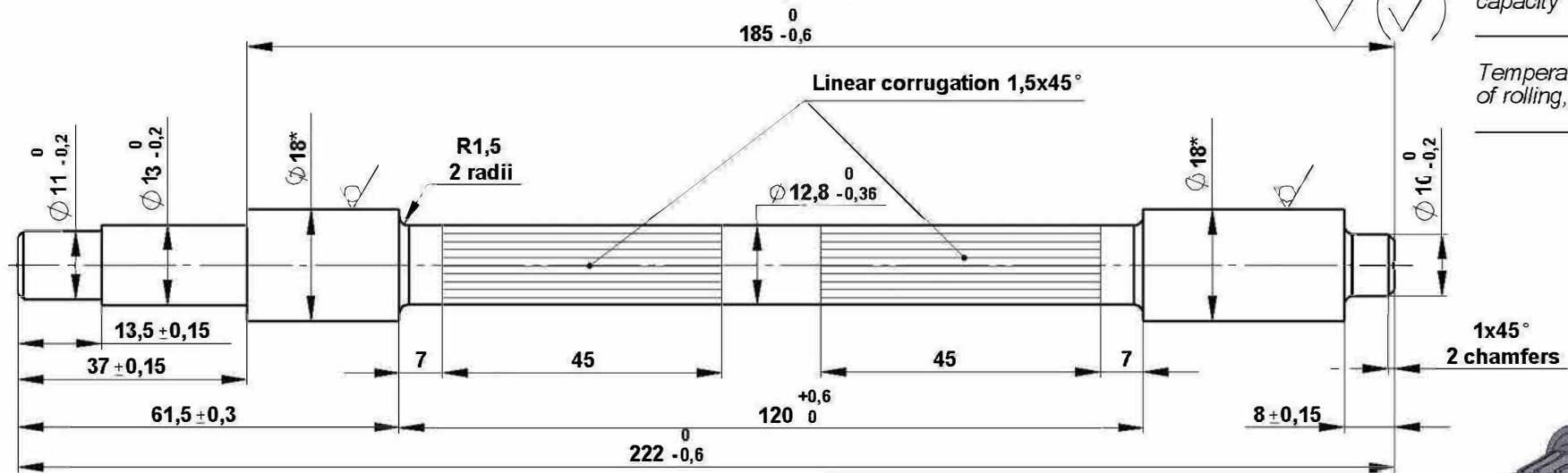
Die length, mm: _____

Output production, pcs/h: _____

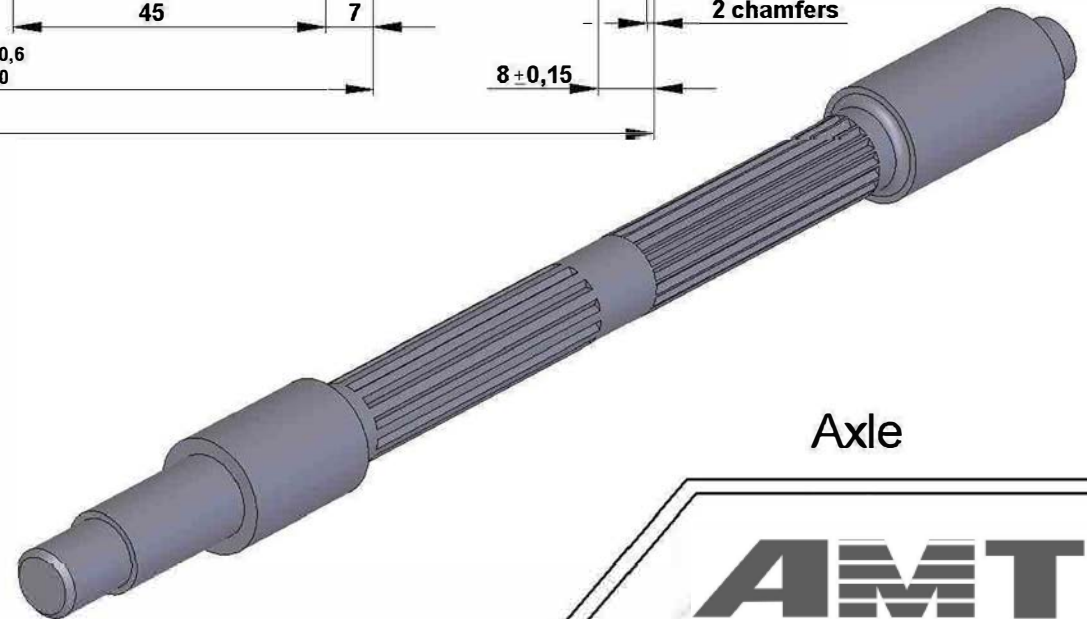
Heater Installed capacity, kw.: _____

Temperature of rolling, ° C: _____

Rolled part



1x45°
2 chamfers



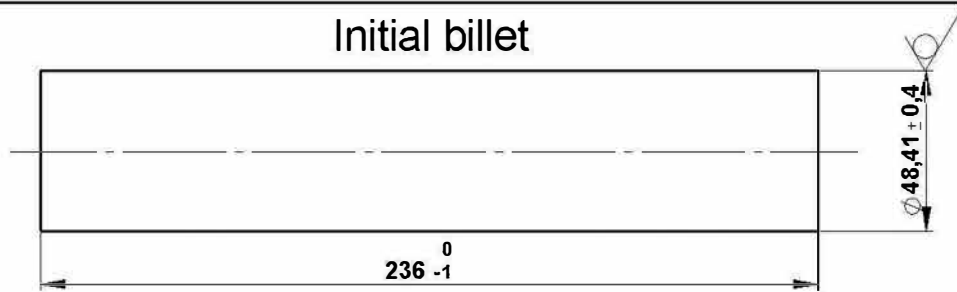
Axle

Material steel:	Russia	Germany	USA
	GOST 4543	DIN	ASTM A646
	30ChMA	1.7264	4130

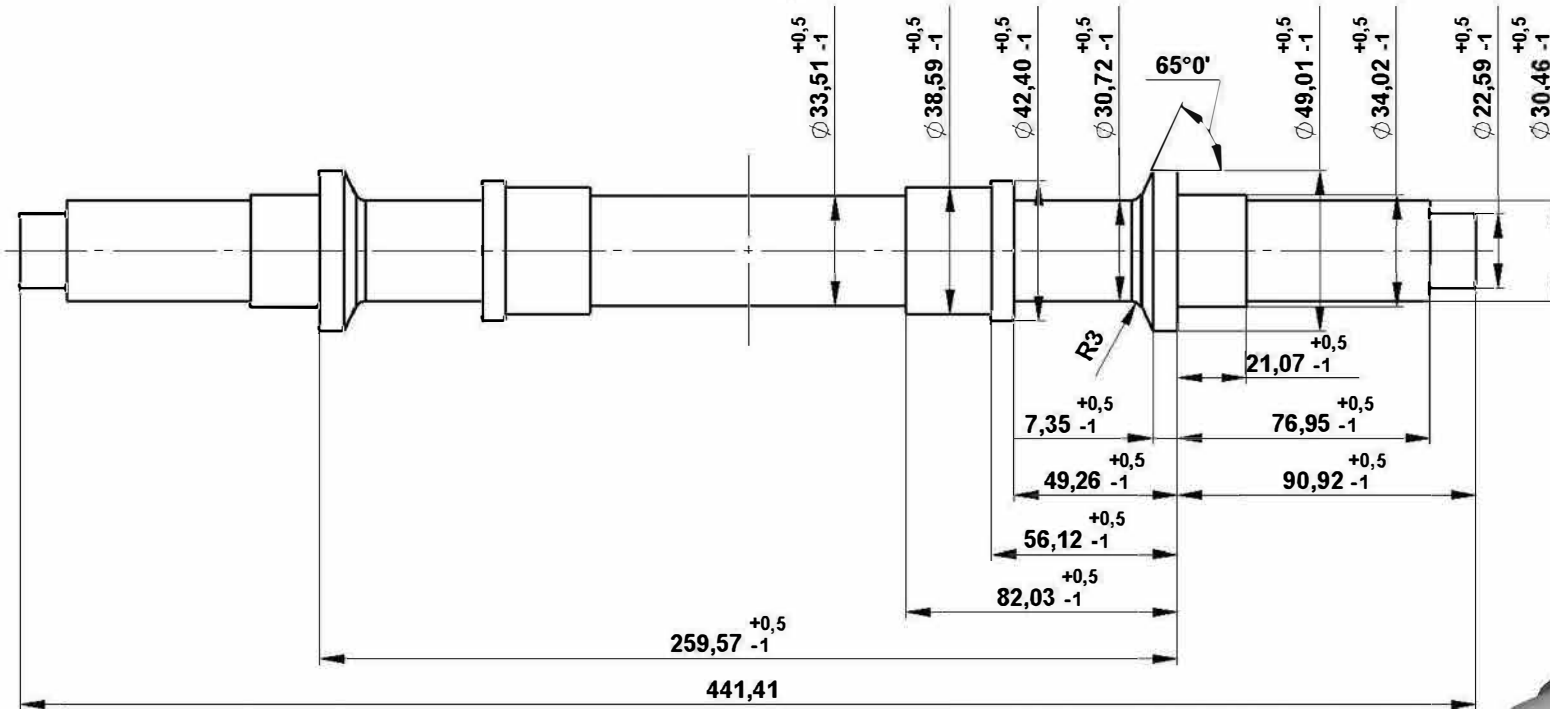
C - 0,26...0,33% Si - 0,17...0,37% Mn - 0,80...1,10% Mo 0,15...0,25%
Cr - 0,80...1,10% Ni - 0,30 max% Cu - 0,30%max

AMT
ENGINEERING

Initial billet



Rolled part



6,3 (✓) (✓)

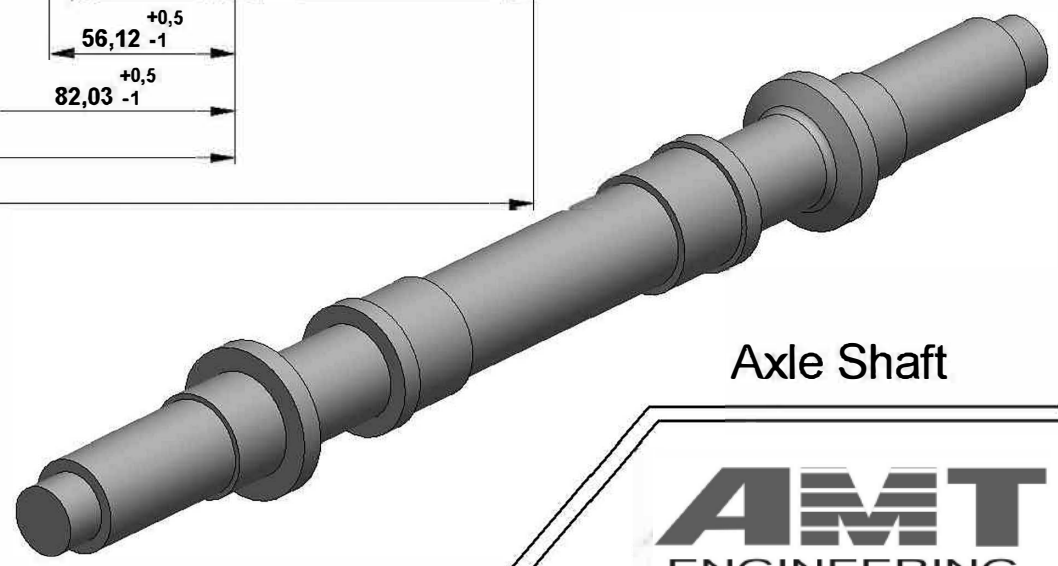
CWR machine type: _____

Die length, mm: _____

Output production, pcs/h: _____

Heater Installed capacity, kw.: _____

Temperature of rolling, ° C: _____

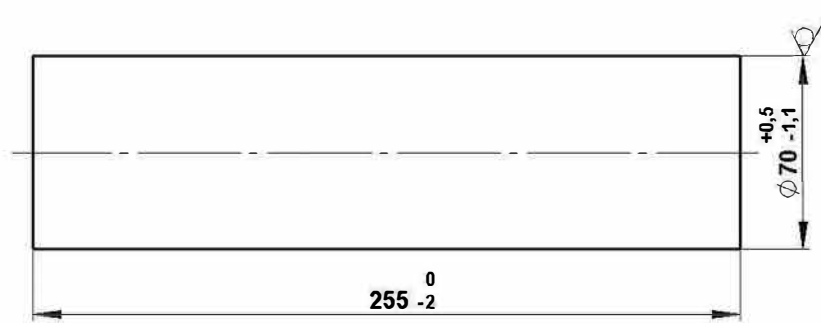


Axle Shaft

	Russia	Germany	USA
Material steel:	GOST 4543 30XMA	DIN 1.7264	ASTM A646 4130
	C - 0,26...0,33%	Si - 0,17...0,37%	Mn - 0,80...1,10%
	Cr - 0,80...1,10%	Ni - 0,30 max%	Mo - 0,15...0,25%
			Cu 0,30max



Initial billet



CWR machine type:

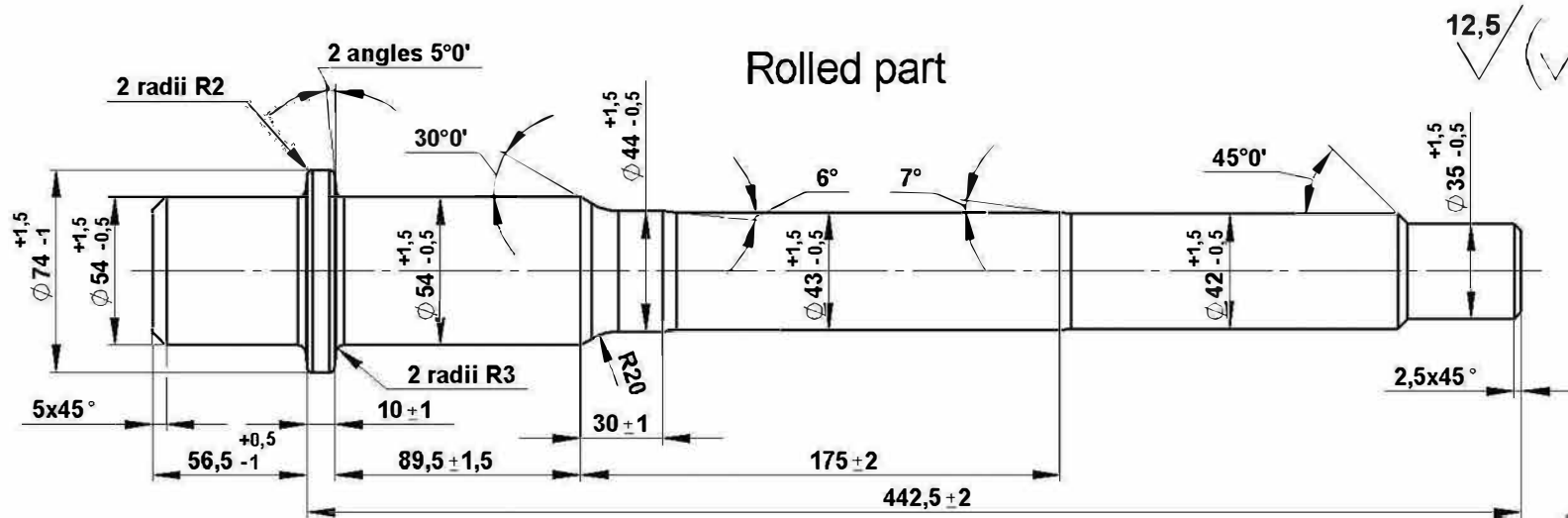
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, ° C:

Rolled part



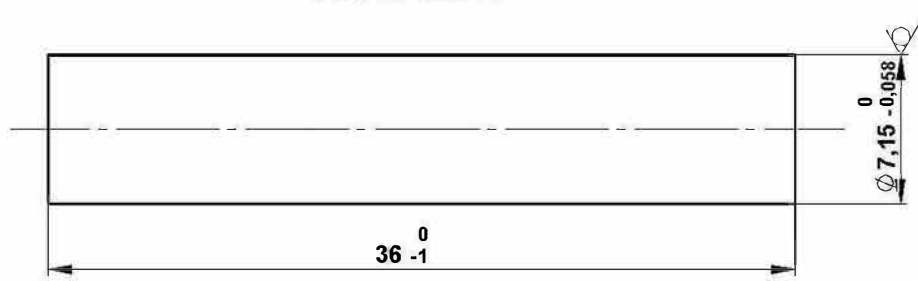
Axle journal

	Russia	Germany	USA
Material steel:	GOST 4543 40ChN	DIN 1.6562	SEA J1268 E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max



Initial billet



CWR machine type:

Die length, mm:

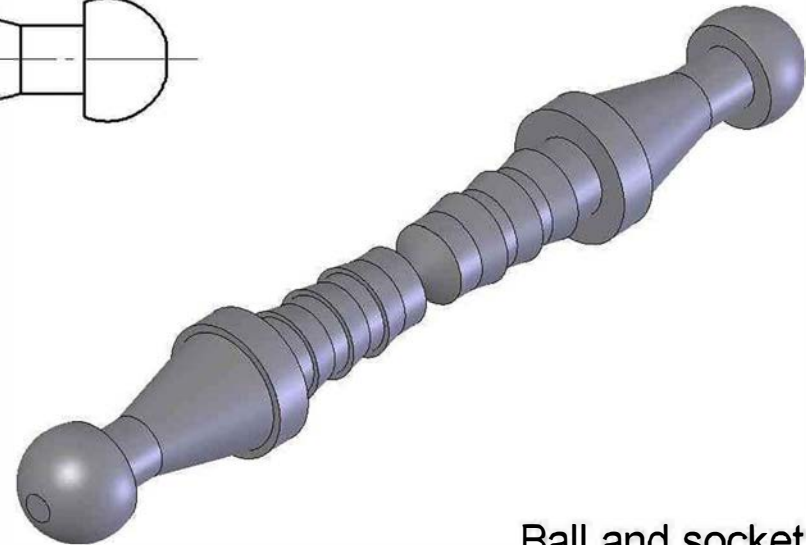
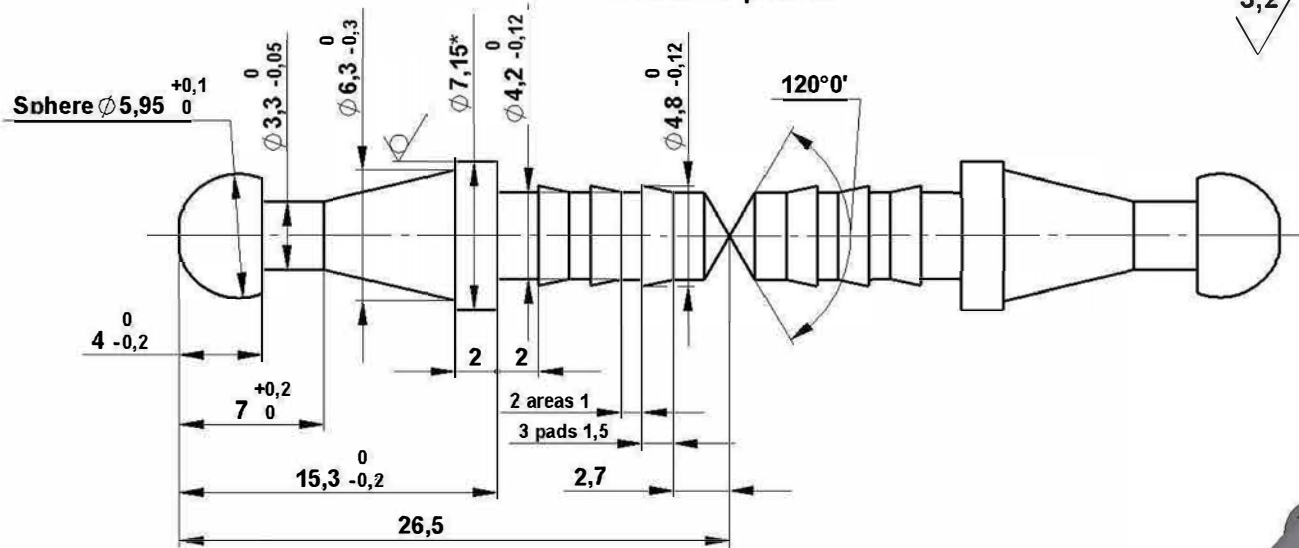
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts

3,2 / (✓)



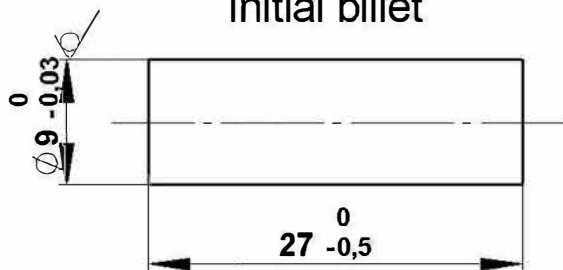
Ball and socket joint

	Russia	Germany	USA
Material	GOST 1050	DIN	AISI
steel:	30	1.6545	8625

C - 0,27...0,35% Si - 0,17...0,37% Cr - 0,25% max As - 0,08% max
 Mn - 0,50...0,80% Ni - 0,25% max Cu - 0,25% max

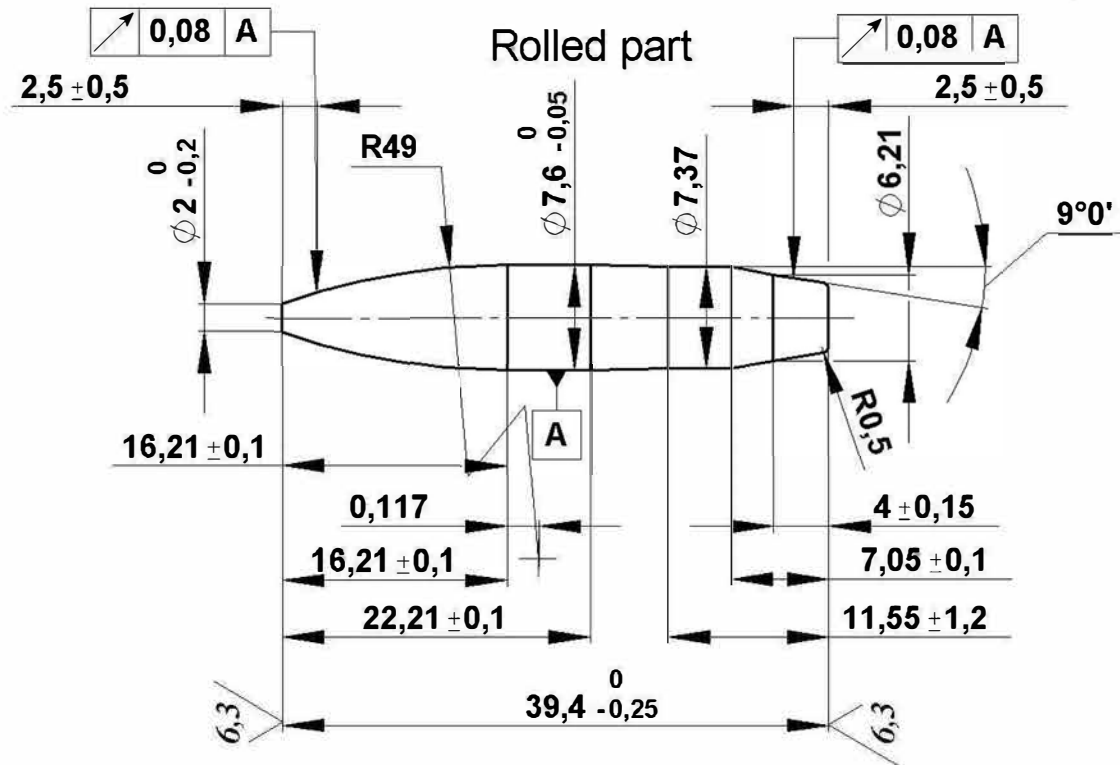
AMT
ENGINEERING

Initial billet



1,6 / (✓)

Rolled part



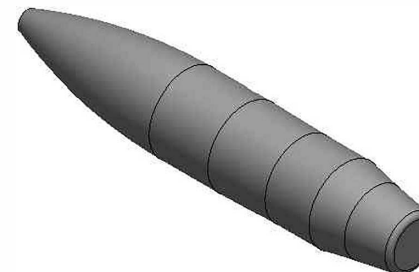
CWR machine type:

Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:



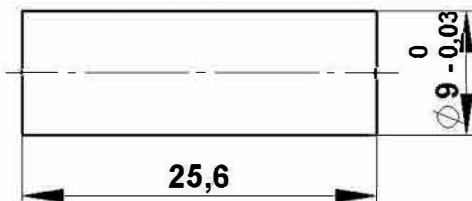
Bullet core

	Russia	Germany	USA
Material	GOST 1435	DIN 17350	AISI W1 Grade C
steel:	U10A	1.1645	ASTM A686

C - 0,96...1,03%	Si - 0,17...0,33%	Mn - 0,17...0,28%
Cr - 0,2% max	Ni - 0,2% max	Cu - 0,2% max

AMT
ENGINEERING

Initial billet



1,6 / (✓)

CWR machine type:

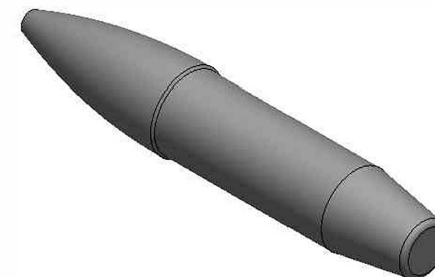
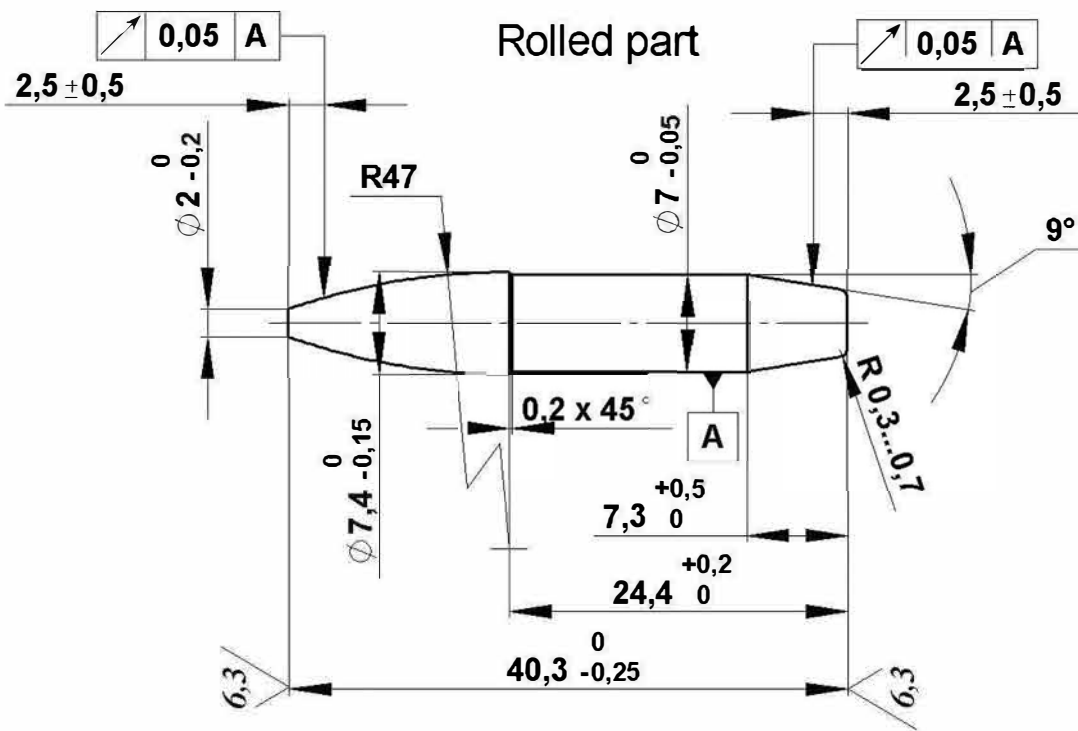
Die length, mm:

Output production, pcs/h :

Heater Installed capacity ,kw.:

Temperature of rolling, ° C :

Rolled part



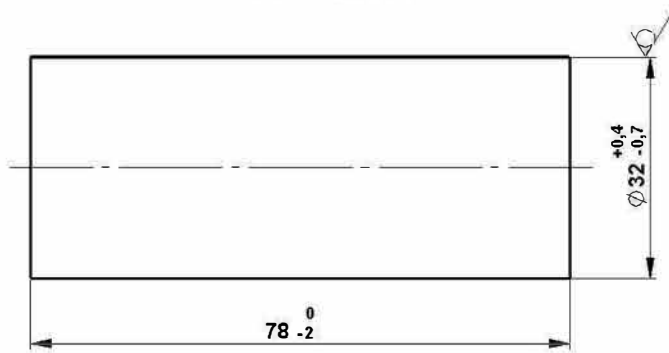
Bullet core

	Russia	Germany	USA
Material	GOST 1435	DIN 17350	AISI W1 Grade C
steel:	U10A	1.1645	ASTM A686

C - 0,96...1,03%	Si - 0,17...0,33%	Mn - 0,17...0,28%
Cr - 0,2% max	Ni - 0,2% max	Cu - 0,2% max

AMT
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Initial billet



CWR machine type:

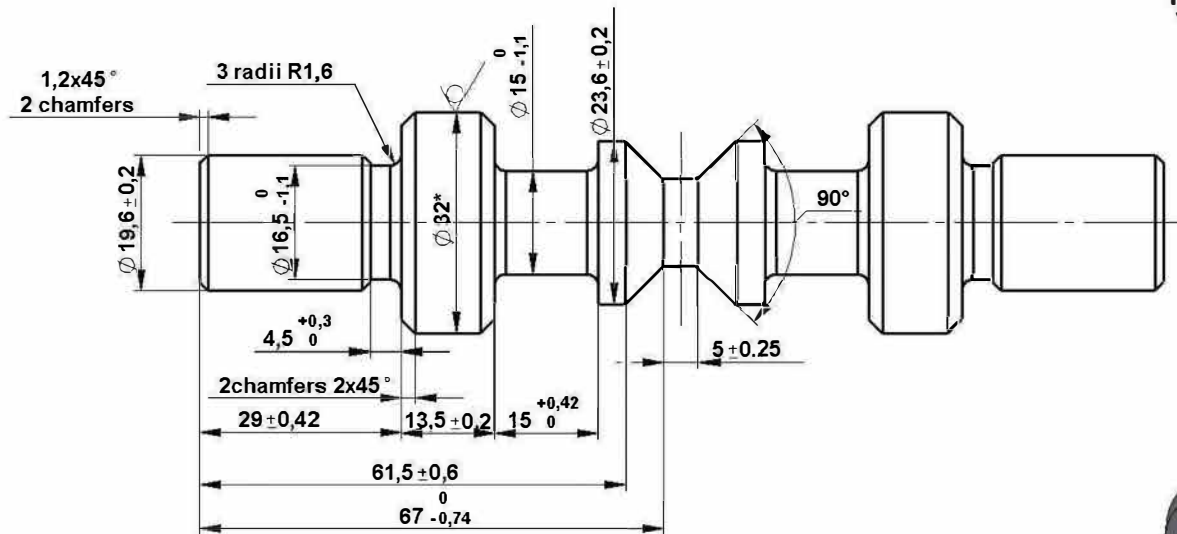
Die length, mm:

Output production, pcs/h:

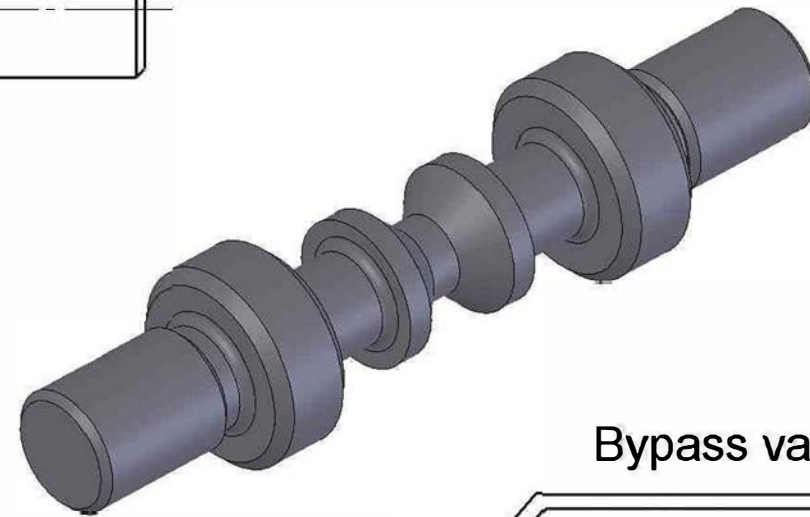
Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part



12,5 (✓)



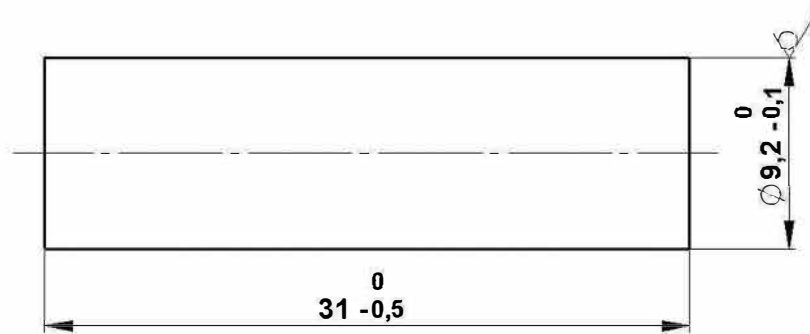
Bypass valve

	Russia	Germany	USA
Material steel:	GOST 4543	DIN 17115	AMS 6372
	35ChM	1.6541	4135

C - 0,32...0,39% Si - 0,17...0,37% Mn - 0,40...0,70% Mo - 0,15...0,25%
 Cr - 0,80...1,10% Ni - 0,30% max Cu - 0,3% max



Initial billet



CWR machine type: _____

Die length, mm: _____

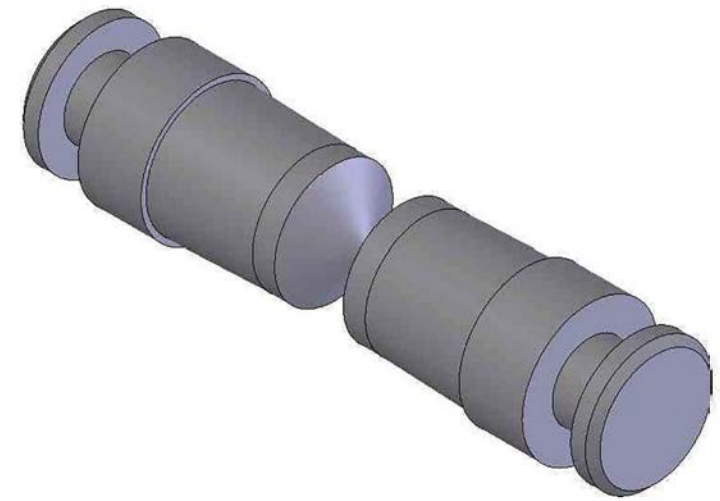
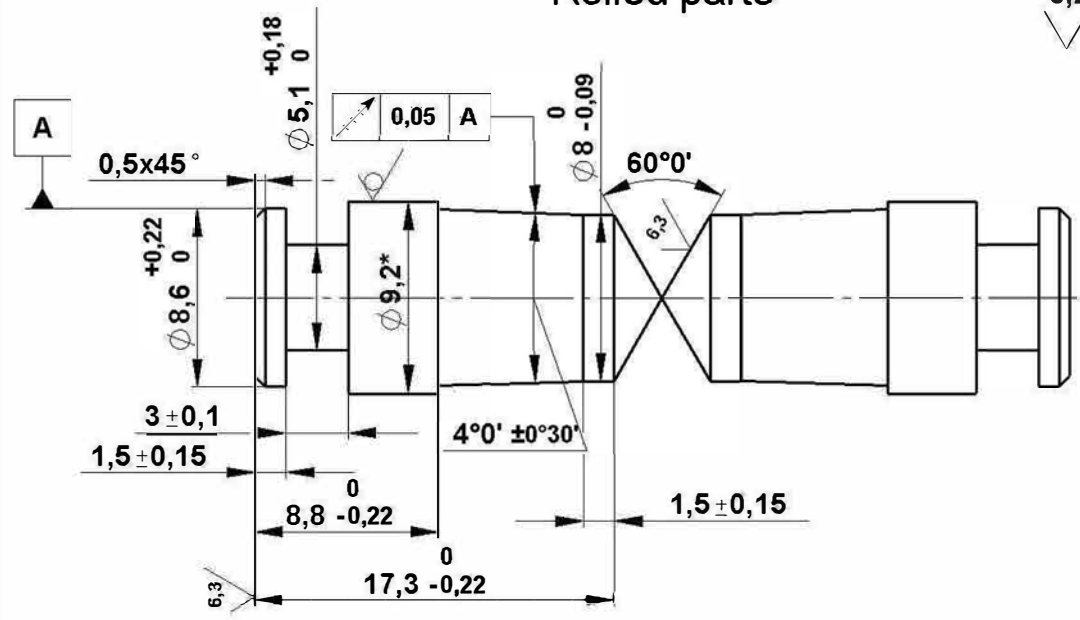
Output production, pcs/h: _____

Heater Installed capacity, kw.: _____

Temperature of rolling, °C: _____

Rolled parts

3,2 (✓)

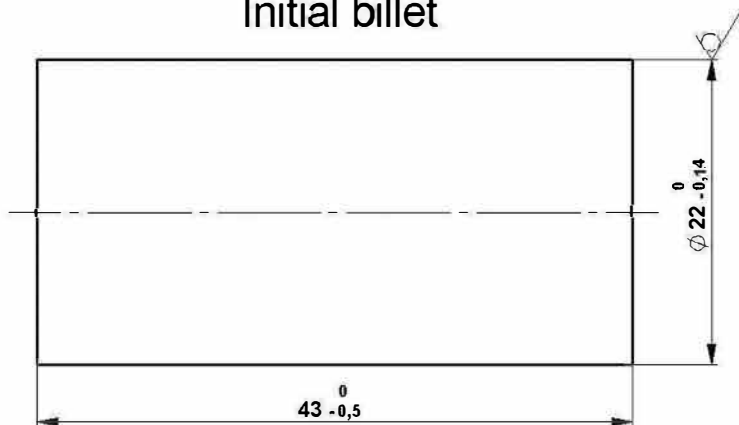


Connecting pipe

	Russia	Germany	USA
Material steel:	GOST 4543	DIN	SEA J1268
	40ChN	1.6562	E4340H
C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%			
Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max			



Initial billet



CWR machine type:

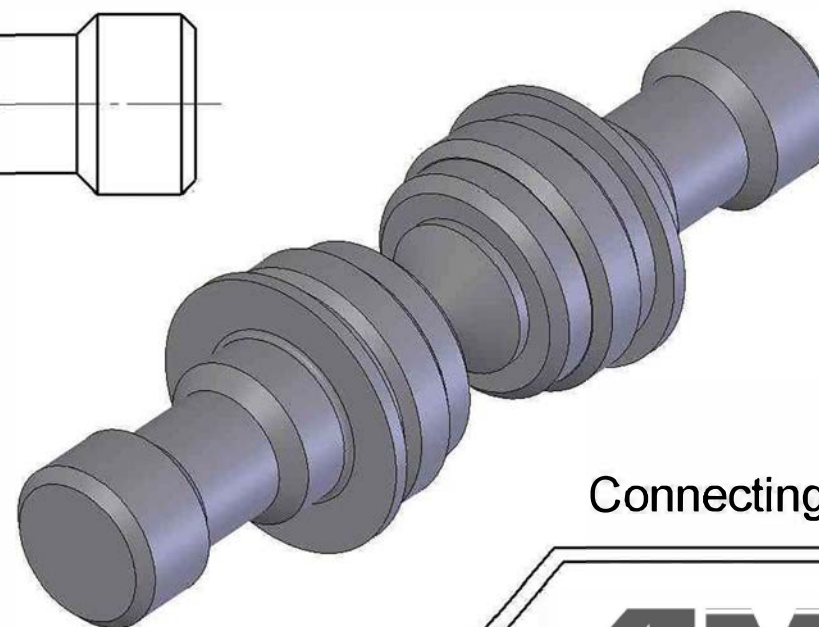
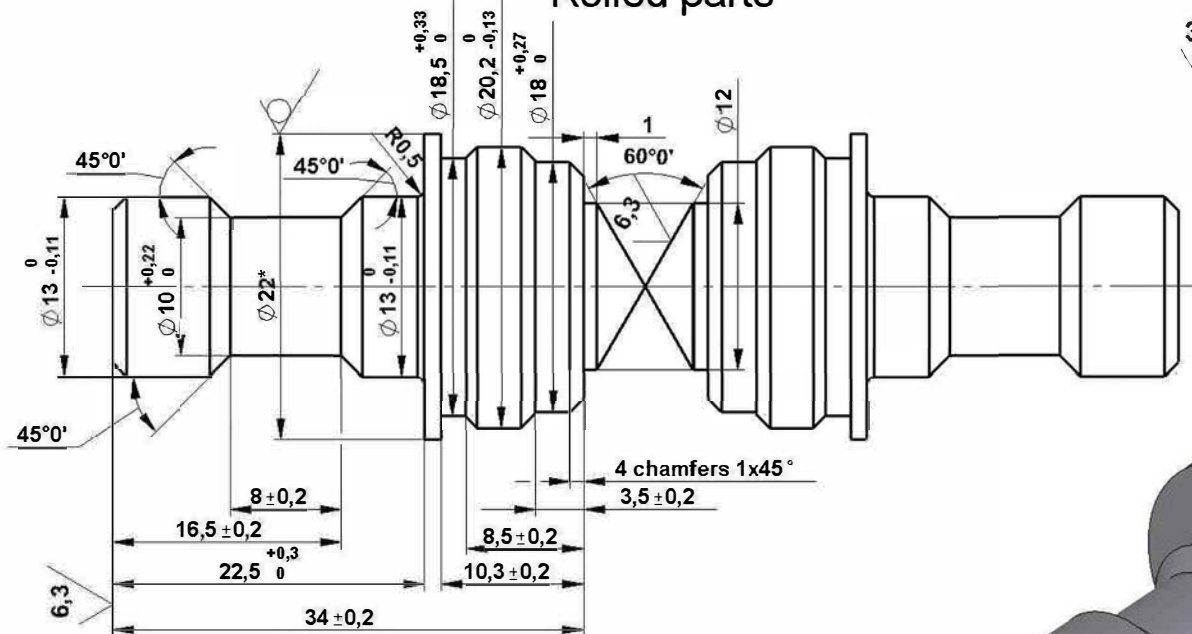
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts



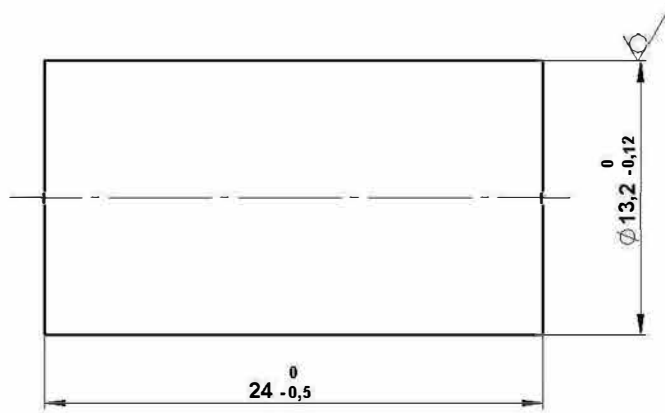
Connecting pipe

	Russia	Germany	USA
Material	GOST 4543	DIN	SEA J1268
steel:	40ChN	1.6562	E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
 Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max



Initial billet



CWR machine type:

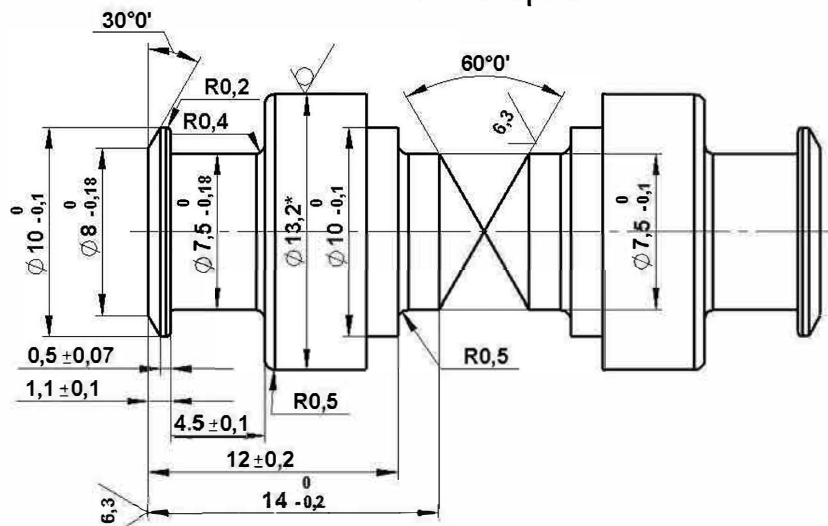
Die length, mm:

Output production, pcs/h :

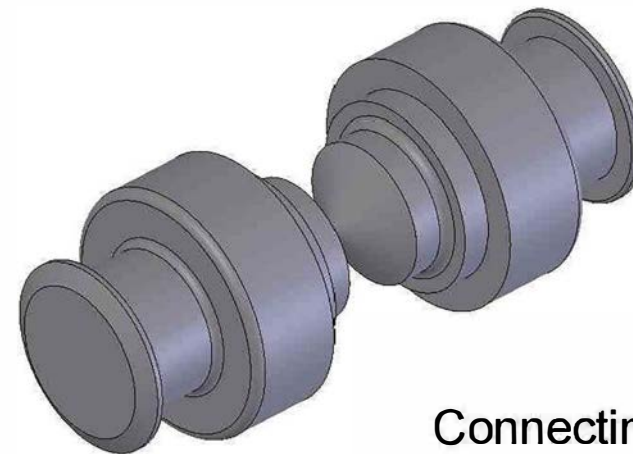
Heater Installed capacity ,kw.:

Temperature of rolling, ° C :

Rolled parts



3,2 (✓)



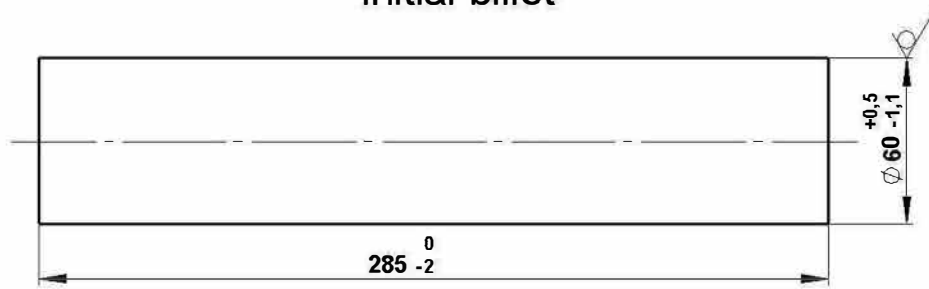
Connecting pipe

	Russia	Germany	USA
Material steel:	GOST 1050	DINN WW	MIL S-11310
	20	1.1134	1022

C - 0,17...0,24% Si - 0,17...0,37% Mn - 0,35...0,65% As - 0,08% max

Cr - 0,25% max Ni - 0,25% max Cu - 0,25% max

Initial billet



CWR machine type:

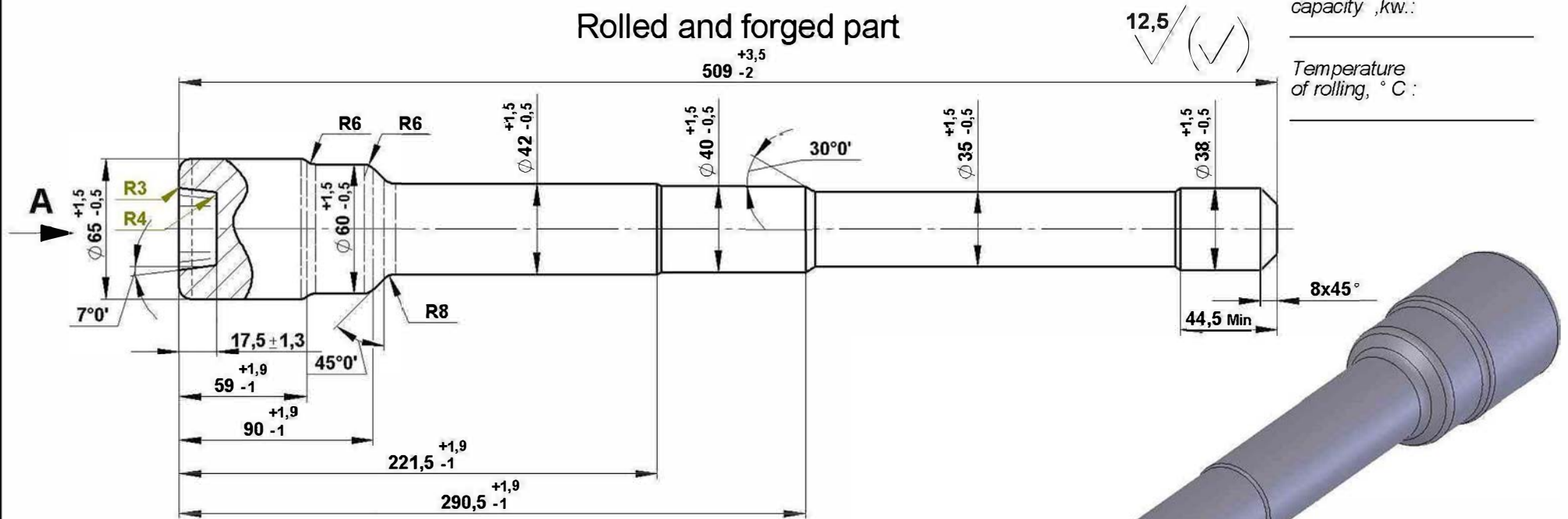
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

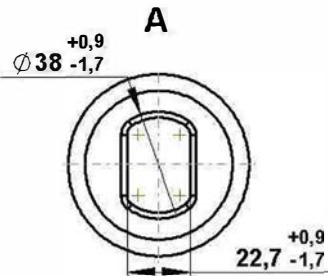
Rolled and forged part



Material steel:

	Russia	Germany	USA
	GOST 4543	DIN 17230	AMS 6381
	38ChS	1.3563	4140

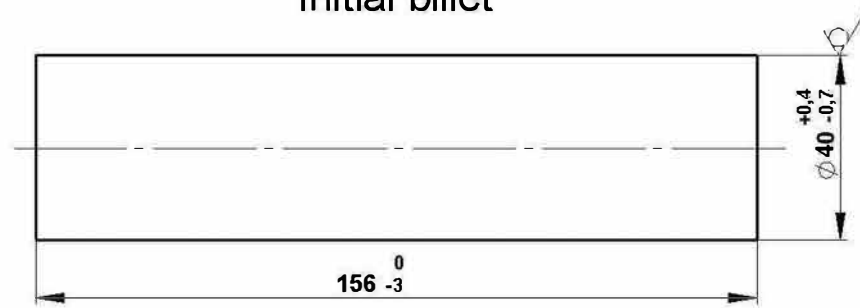
C - 0,34...0,42% Si - 1,00...1,40% Mn - 0,30...0,60% Mo - 0,15...0,25%
 Cr - 1,30...1,60% Ni - 0,30% max Cu - 0,30% max



Coupler-shaft



Initial billet



CWR machine type:

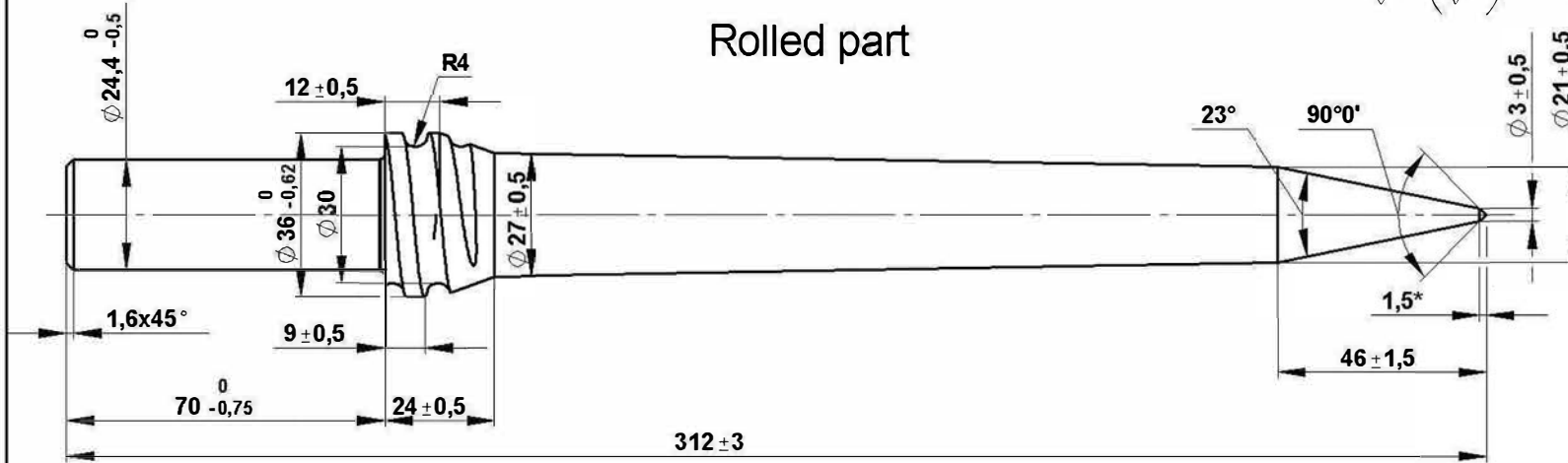
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part



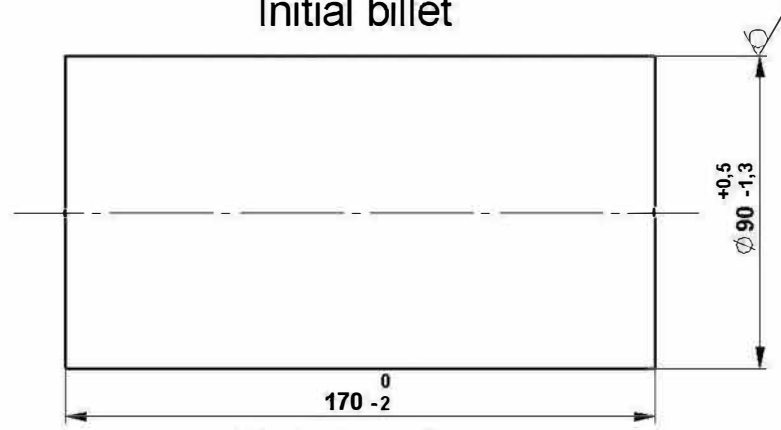
Drill pick

Material steel:	Russia	Germany	USA
	GOST 1435	DIN 17350	AISI W1 Grade C
	U10A	1.1645	ASTM A686

C - 0,96...1,03%	Si - 0,17...0,33%	Mn - 0,17...0,28%
Cr - 0,2% max	Ni - 0,2% max	Cu - 0,2% max

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Initial billet



CWR machine type: _____

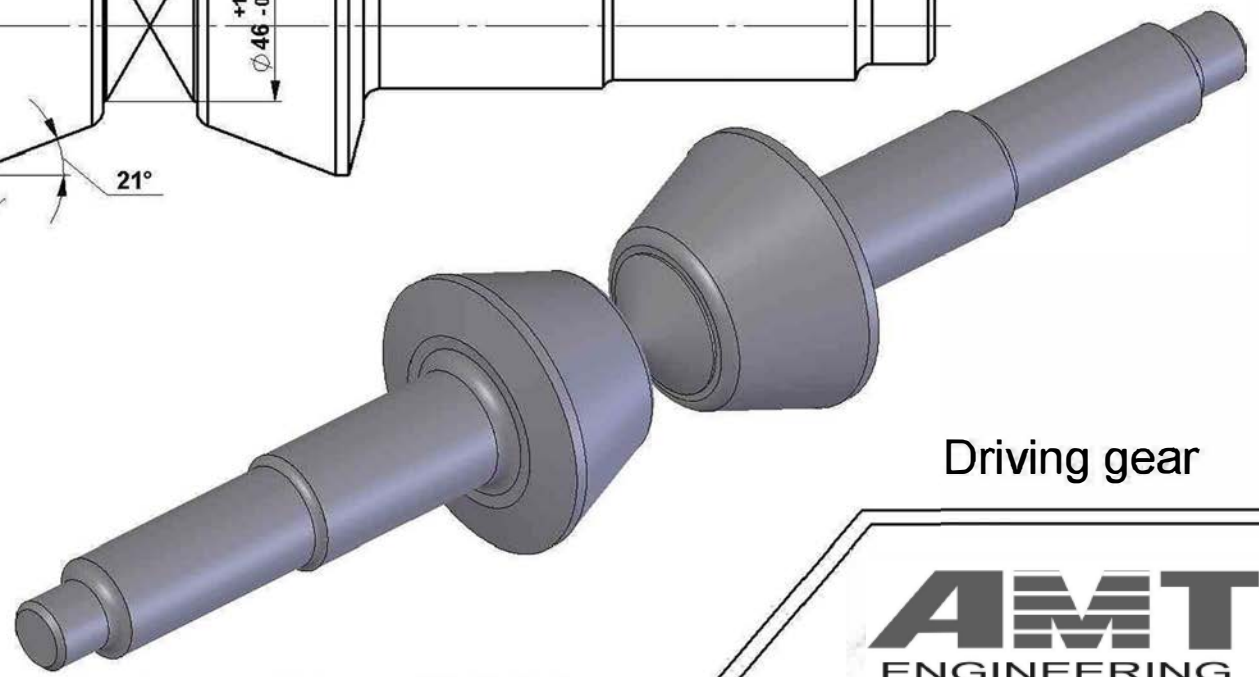
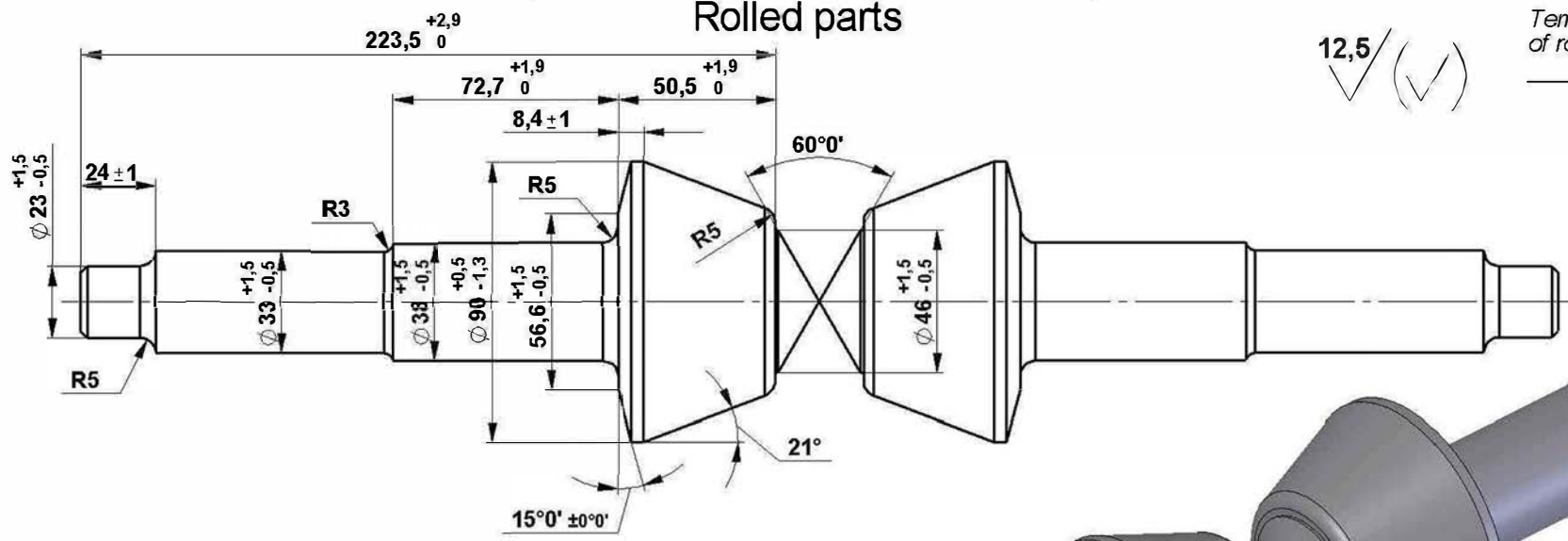
Die length, mm: _____

Output production, pcs/h: _____

Heater Installed capacity, kw.: _____

Temperature of rolling, ° C: _____

Rolled parts



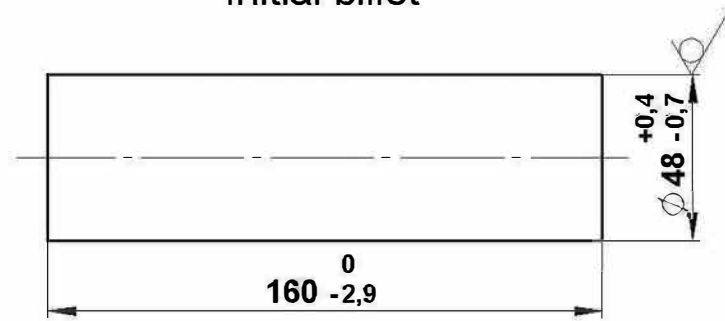
Driving gear

	Russia	Germany	USA
Material steel:	GOST 4543 20ChGNM	DIN 17210 1.6523	AISI 8620H ASTM A304

C - 0,18...0,23%	Si - 0,17...0,37%	Mo - 0,15...0,35
Cr - 0,40...0,70%	Ni - 0,40...0,70	Mn - 0,70...1,10%



Initial billet



12,5 (✓)

CWR machine type: _____

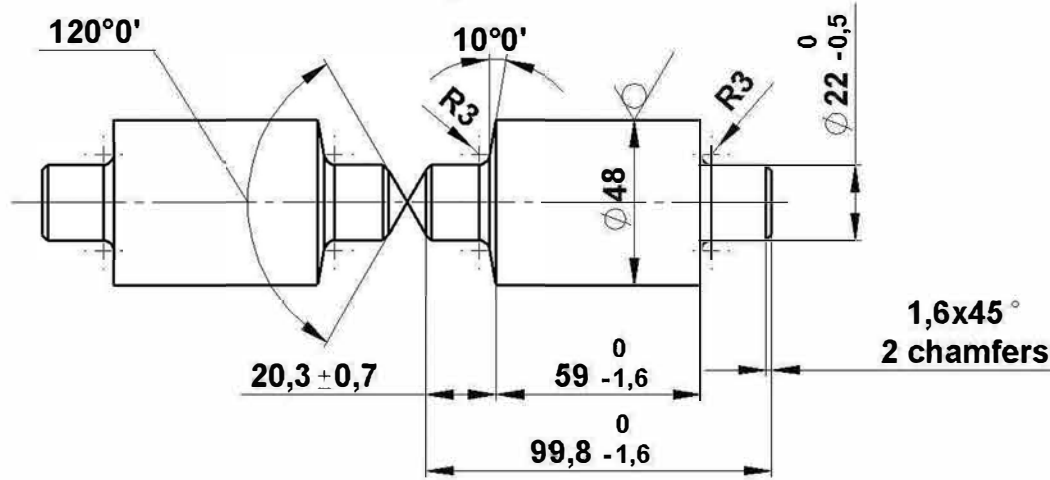
Die length, mm: _____

Output production, pcs/h: _____

Heater Installed capacity, kw.: _____

Temperature of rolling, °C: _____

Rolled parts

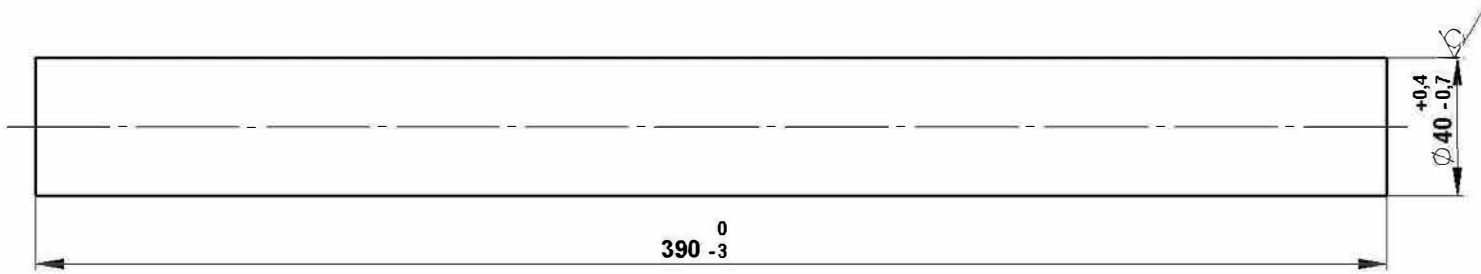


Gear wheel

Material steel:	Russia	Germany	USA
	GOST 14959	DIN 17200	AISI 6150
	50ChFA	1.8159	ASTM A322
	C-0,47...0,55%	Si-0,15...0,3%	Mn-0,3...0,6%
	Cr-0,75...1,1%	V-0,15...0,25%	



Initial billet



CWR machine type: _____

Die length, mm: _____

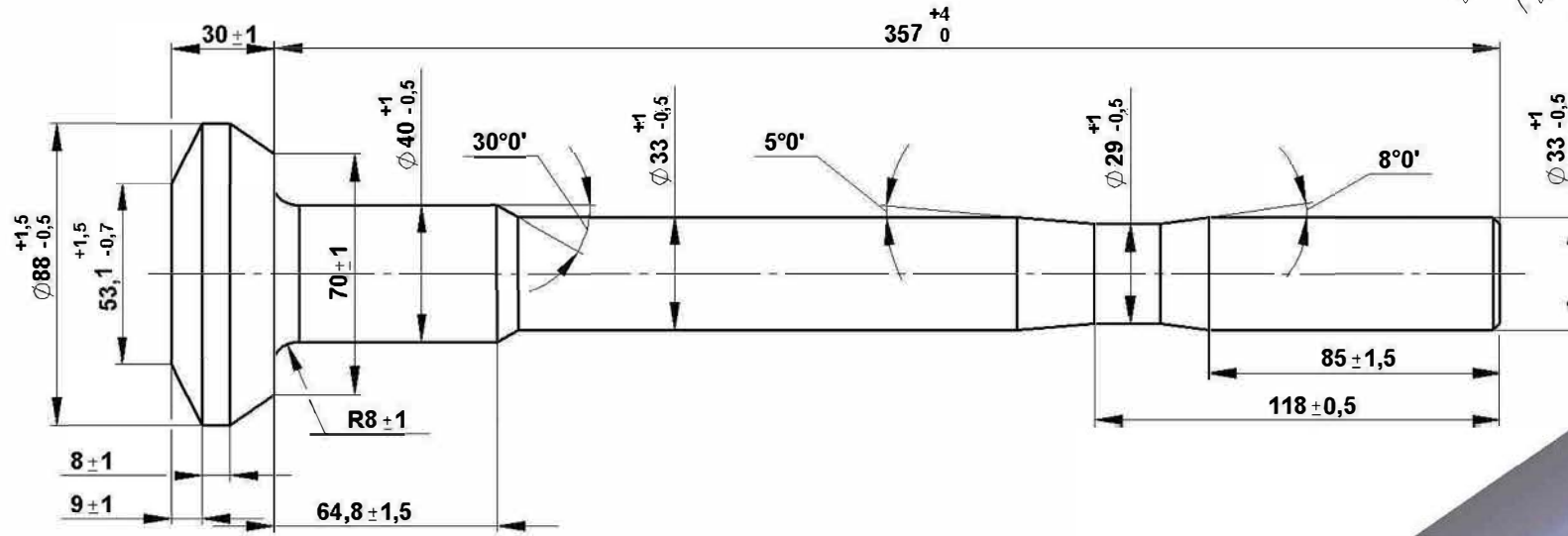
Output production, pcs/h: _____

Heater Installed capacity, kw.: _____

Rolled and forged part

12,5 (✓) (✓)

Temperature of rolling, ° C: _____



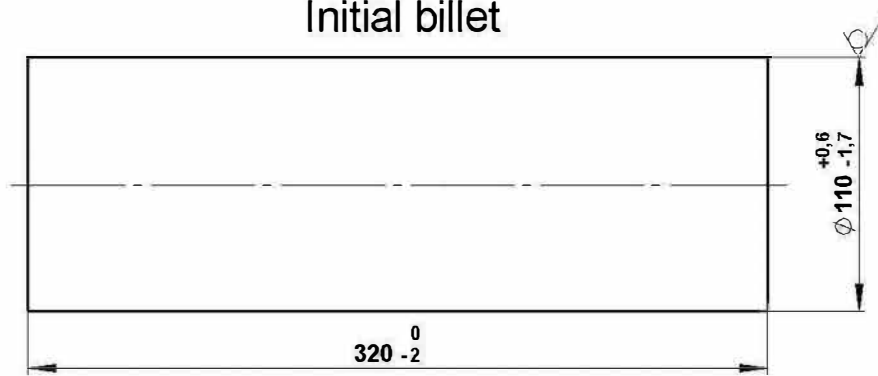
Gear-shaft

	Russia	Germany	USA
Material	GOST 4543	DIN	SEA J1268
steel:	40ChN	1.6562	E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
 Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max



Initial billet



CWR machine type:

Die length, mm:

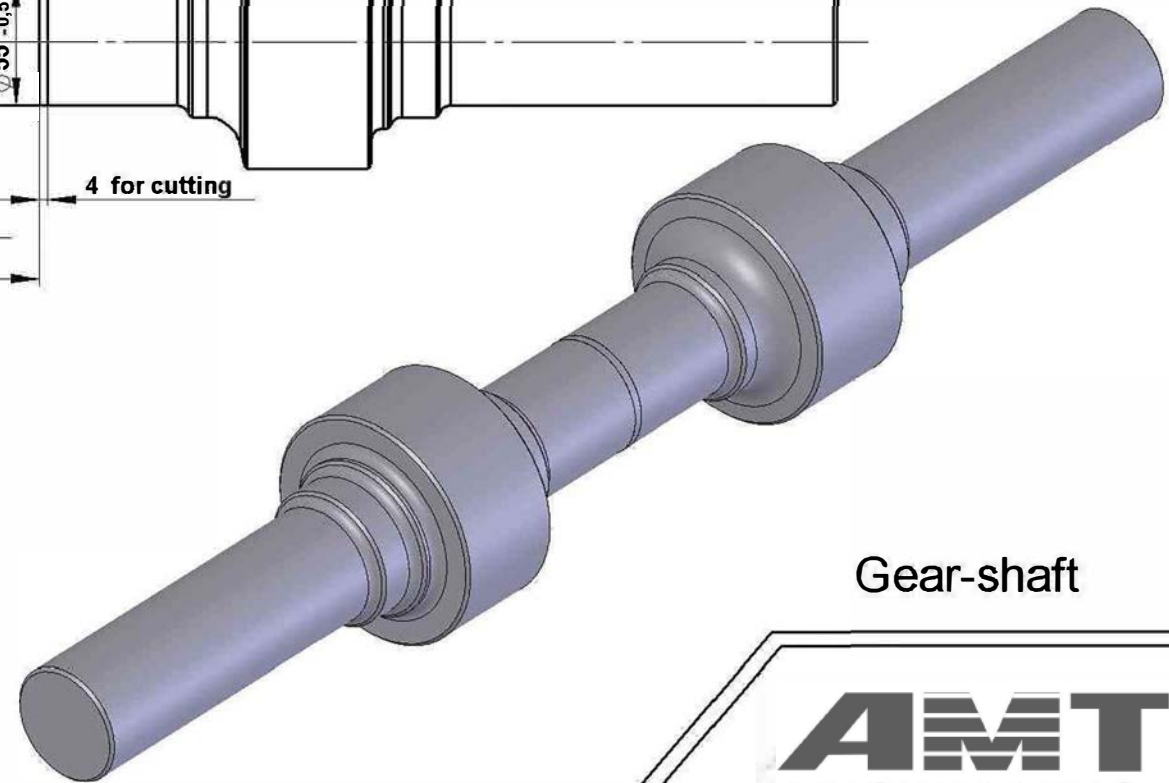
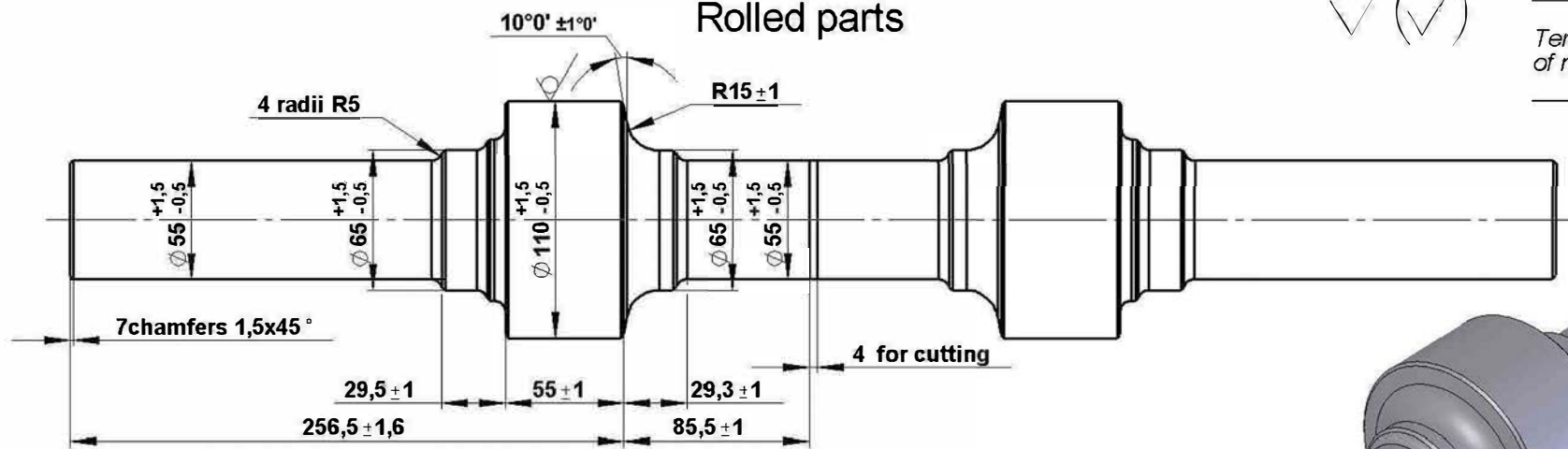
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts

12,5 (✓) (✓)



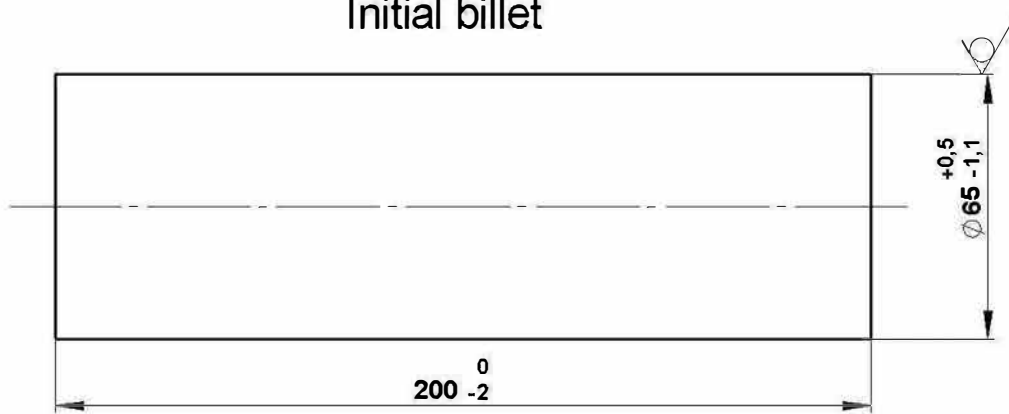
Gear-shaft

	Russia	Germany	USA
Material	GOST 4543	DIN	SEA J1268
steel:	40ChN	1.6562	E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
 Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max



Initial billet



CWR machine type:

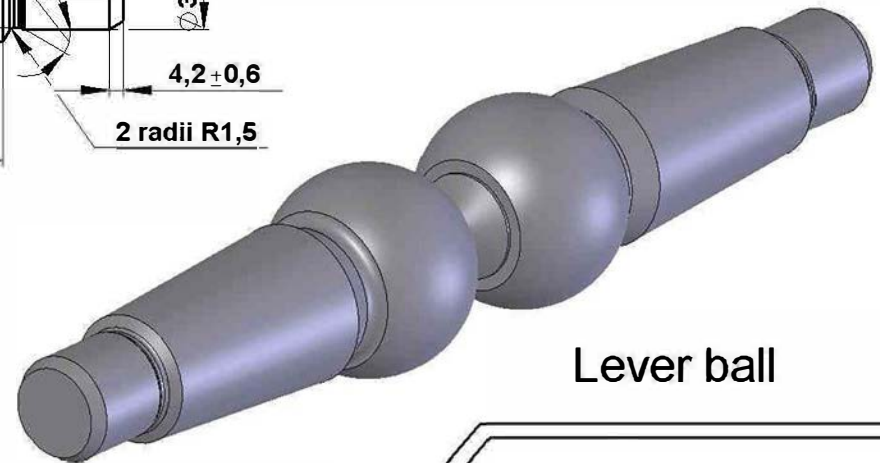
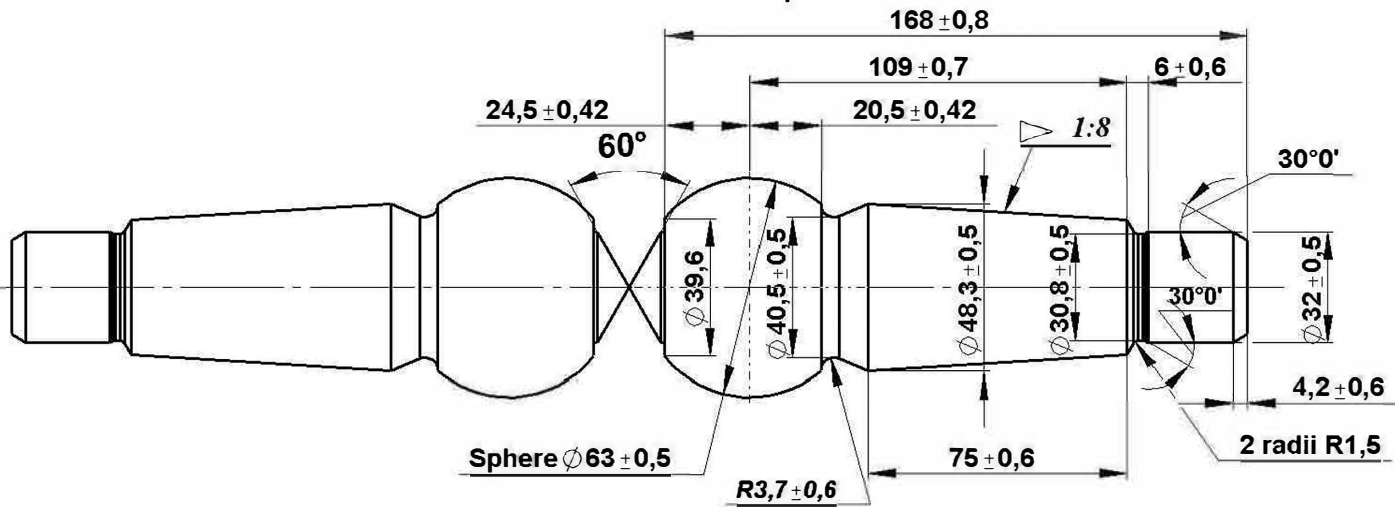
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, ° C:

Rolled parts

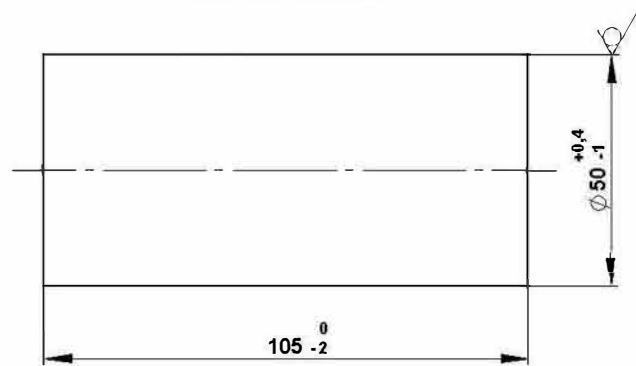


Lever ball

	Russia	Germany	USA
Material	GOST 1050	DIN 17140	1040
steel:	45	1.0541	ASTM A866

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,5...0,8%
 Cr - 0,25% max Cu - 0,25% max Ni - 0,25% max

Initial billet



CWR machine type:

Die length, mm:

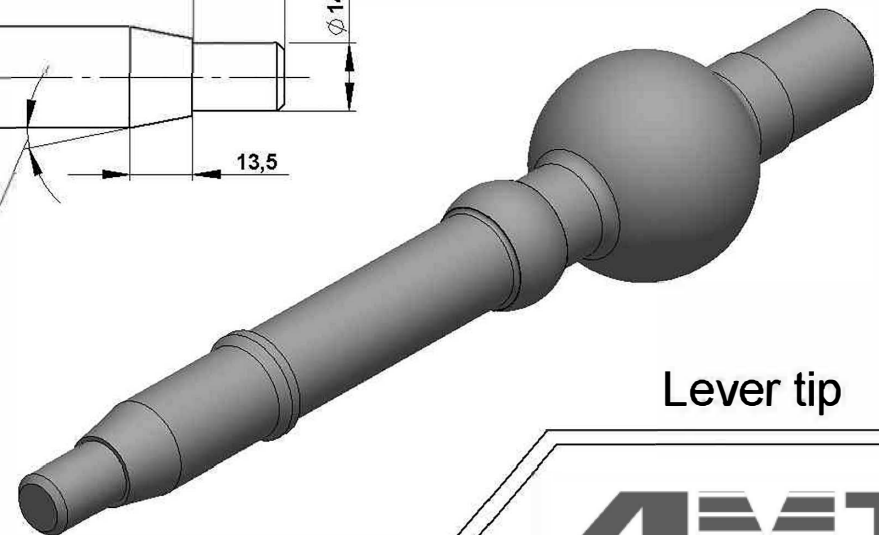
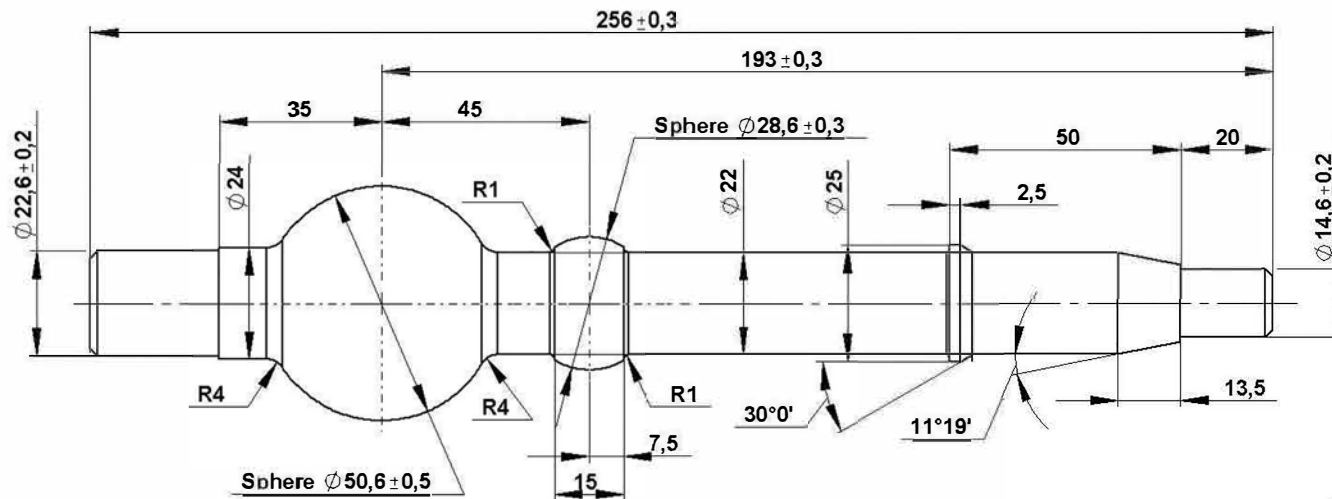
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part

12,5 (✓) (✓)



Lever tip

	Russia	Germany	USA
Material steel:	GOST 4543 18ChGT	DIN 17230 1.3526	AISI 5120H ASTM A304

C - 0,17...0,23% Si - 0,17...0,37% Mn - 0,80...1,10% Cu - 0,30% max
Cr - 1,00...1,30% Ti - 0,03...0,09% Ni - 0,3% max



Initial billet



CWR machine type:

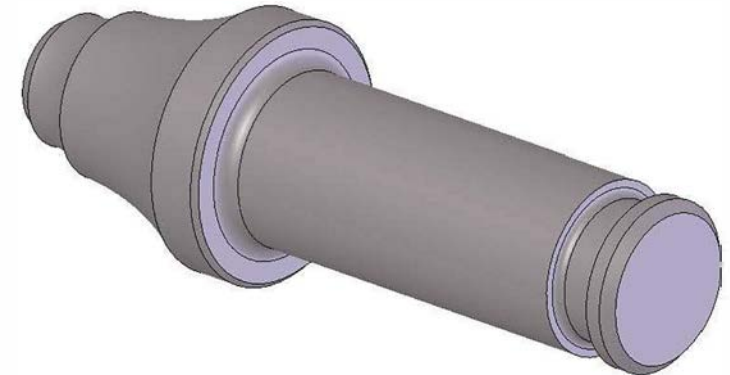
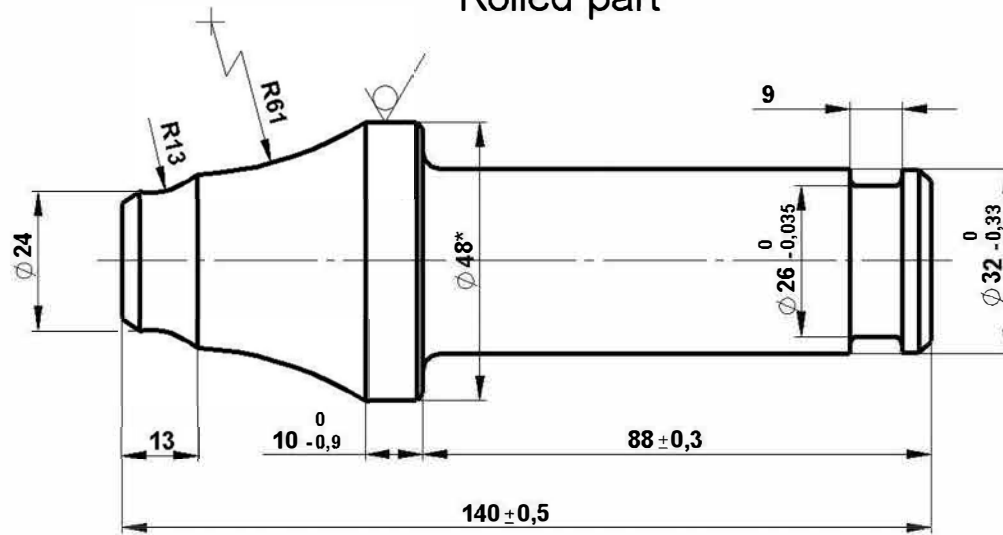
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part



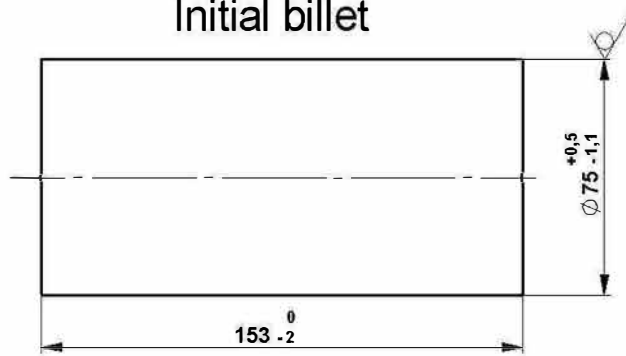
Mining cutter

	Russia	Germany	USA
Material steel:	GOST 4543 30XMA	DIN 1.7264	ASTM A646 4130

C - 0,26...0,33% Si - 0,17...0,37% Mn - 0,80...1,10% Cu 0,30max

Cr - 0,80...1,10% Ni - 0,30 max% Mo - 0,15...0,25%

Initial billet



CWR machine type:

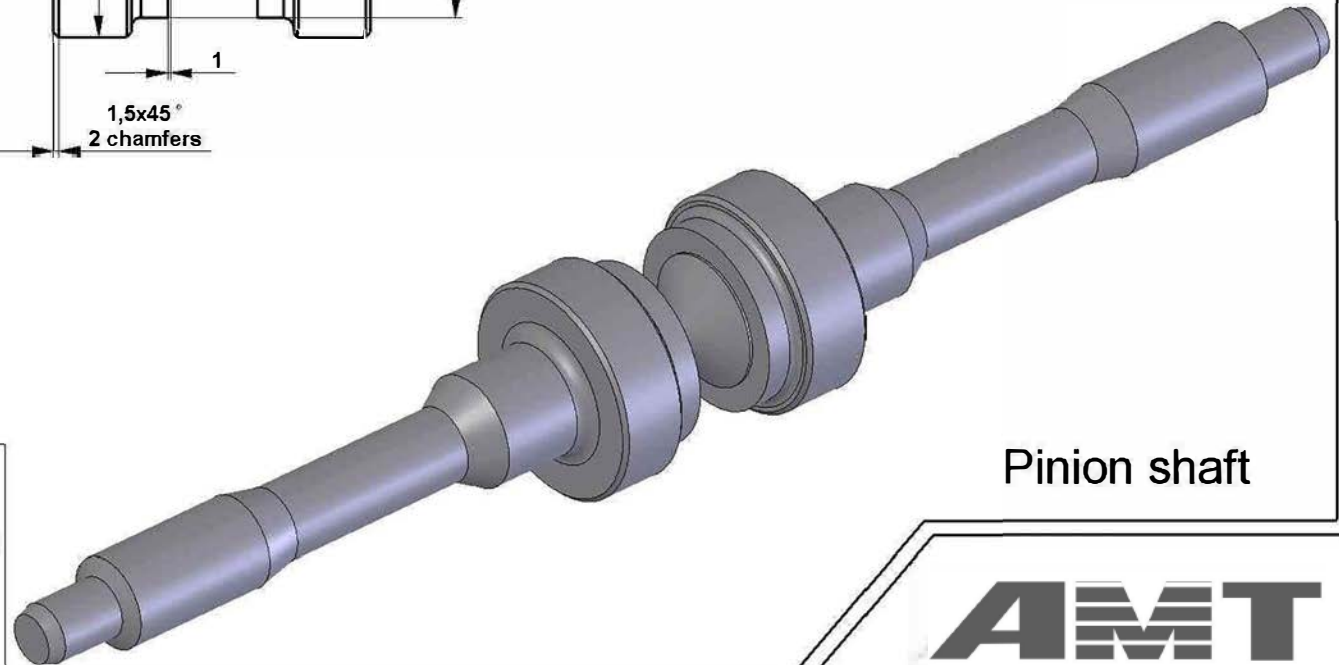
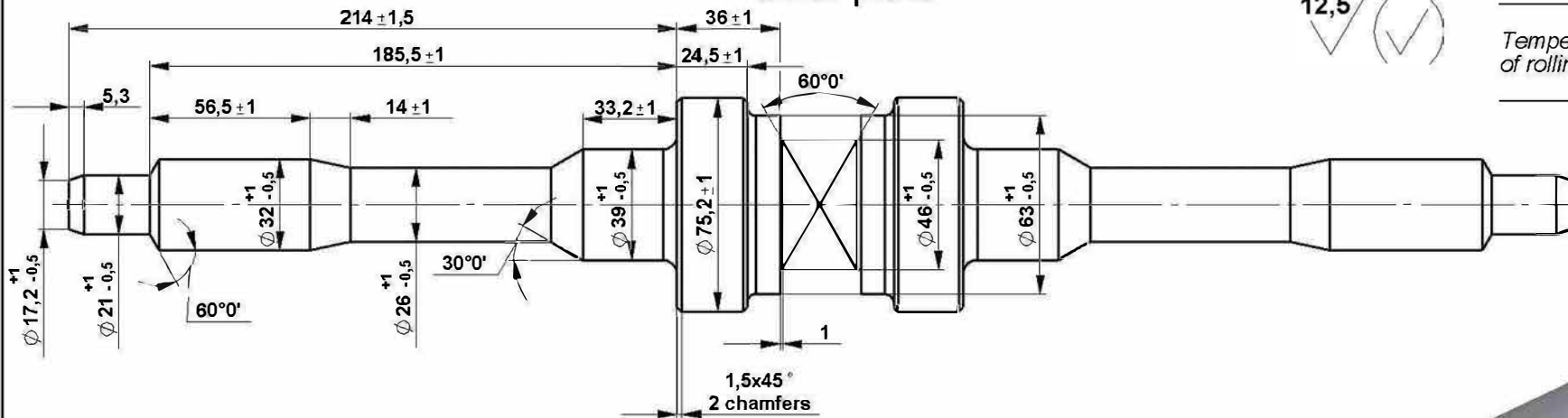
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts

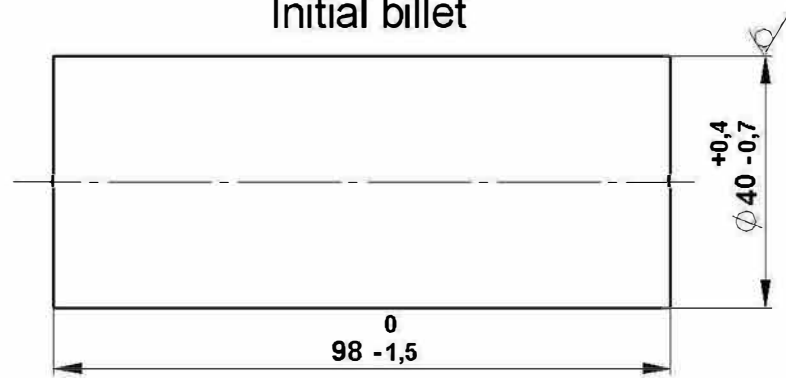


Pinion shaft

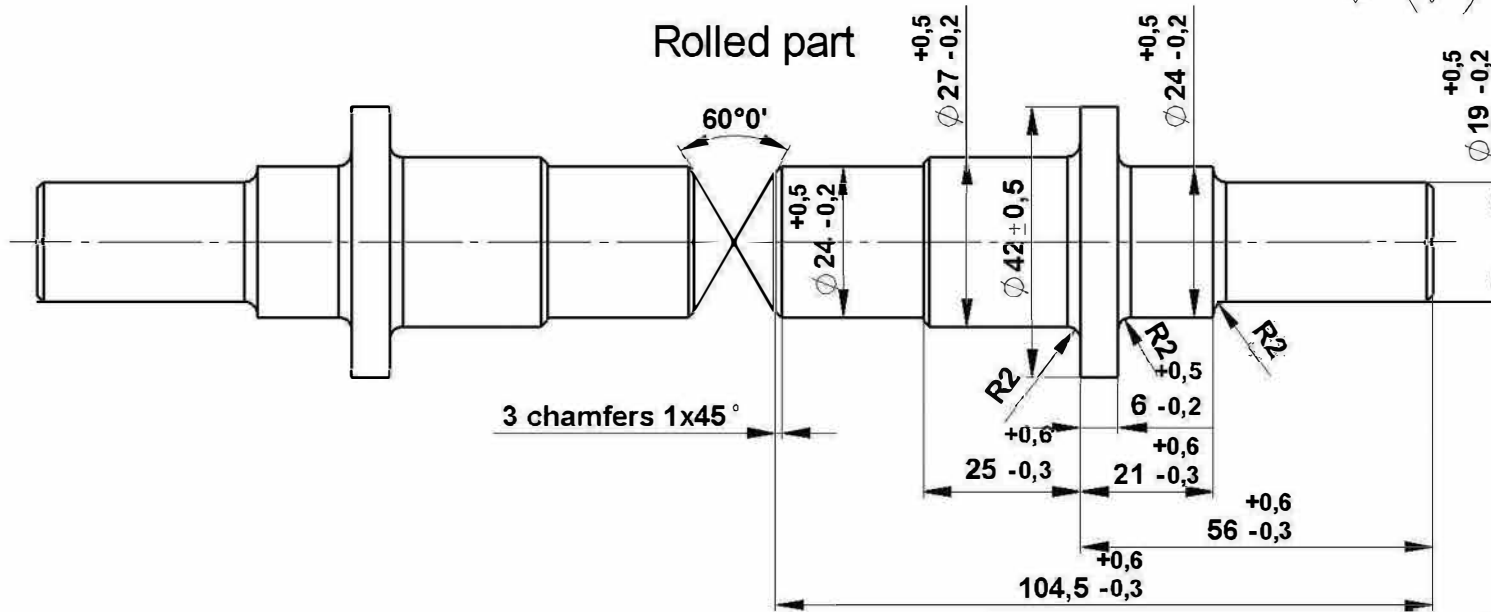
	Russia	Germany	USA
Material	GOST 4543	DIN 17210	AISI 8620H
steel:	20ChGNM	1.6523	ASTM A304

C - 0,18...0,23%	Si - 0,17...0,37%	Mo - 0,15...0,35
Cr - 0,40...0,70%	Ni - 0,40...0,70	Mn - 0,70...1,10%

Initial billet



Rolled part



CWR machine type:

Die length, mm:

Output production, pcs/h:

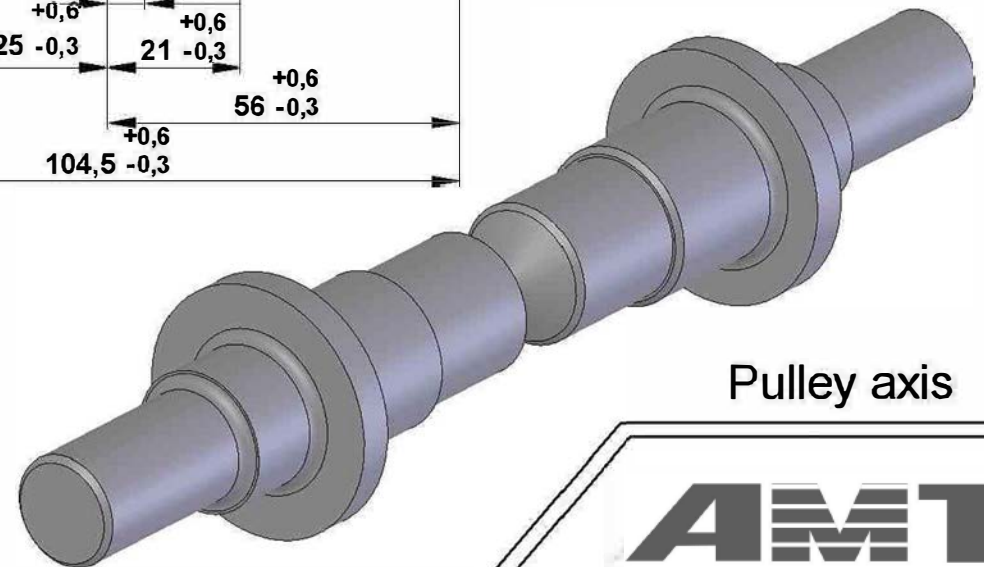
Heater Installed capacity, kw.:

Temperature of rolling, °C:

	Russia	Germany	USA
Material steel:	GOST 1050 45	DIN 1.6546	ASTM A322 94B30

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,50...0,80%

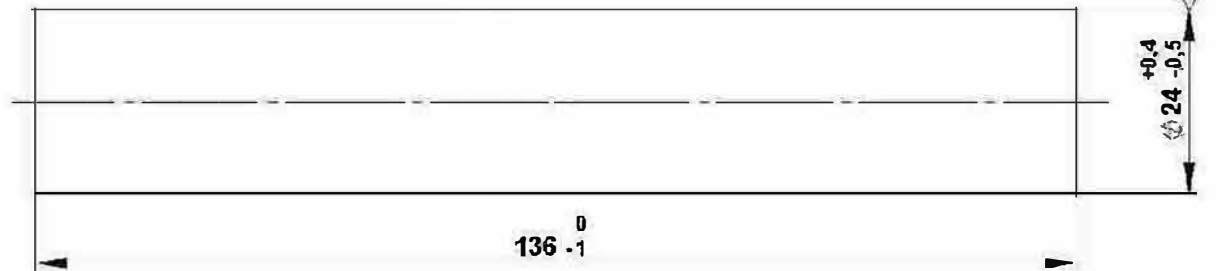
Cr - 0,25% max Ni - 0,25% max Cu 0,25% max As - 0,08% max



Pulley axis

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Initial billet



CWR machine type:

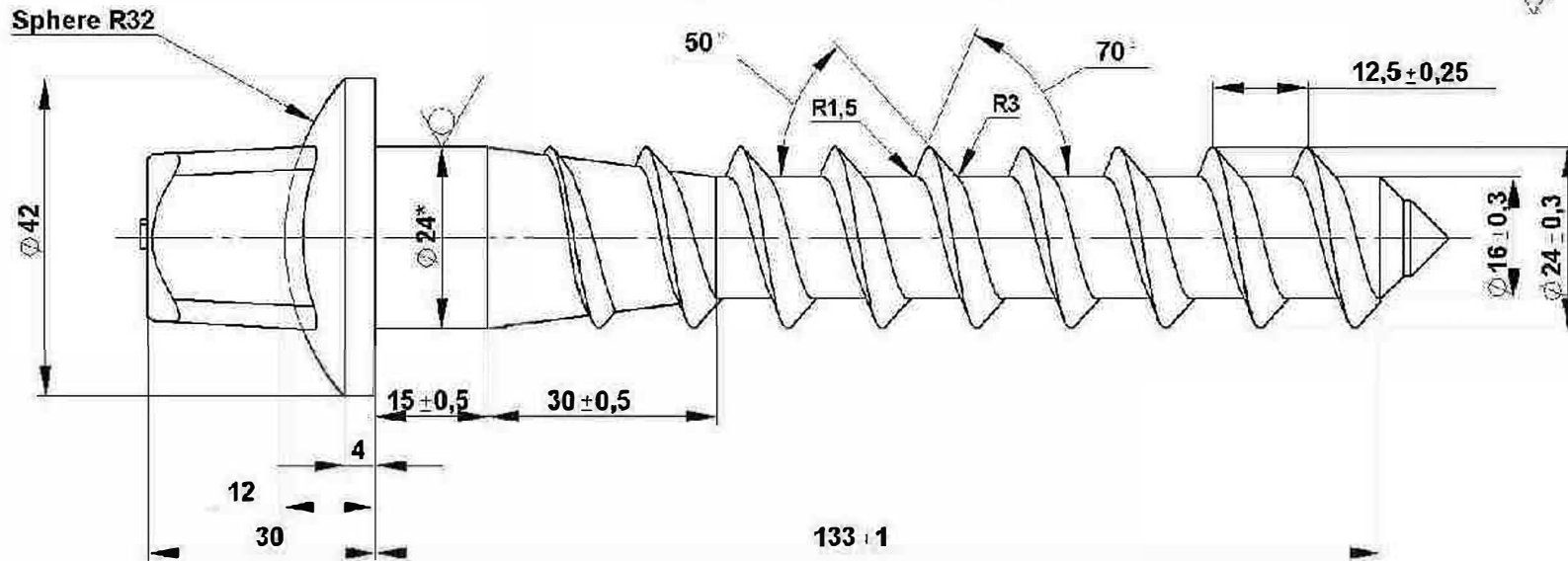
Die length, mm:

Output production, pcs/h:

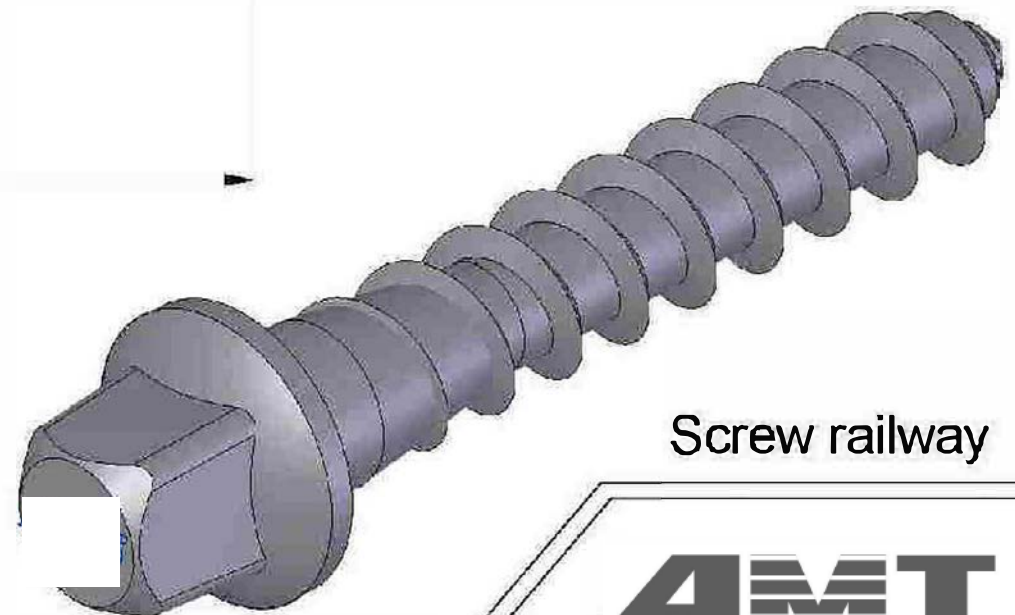
Heater Installed capacity, kw:

Temperature of rolling, °C:

Forged and rolled part



12,5
✓ (✓)

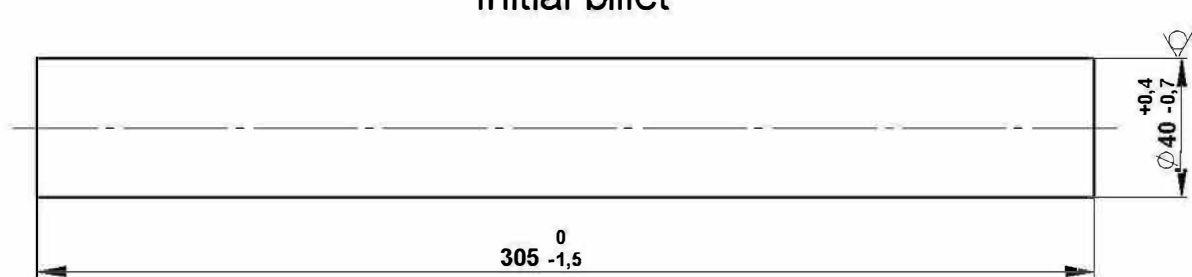


Screw railway

Material steel:	Russia	Germany	USA
	GOST 1050	DIN	ASTM A322
	45	1.6546	94B30
	C - 0,42..0,50%	Si - 0,17..0,37%	Mn - 0,50..0,80%
	Cr - 0,25% max	Ni - 0,25% max	Mo - 0,15..0,25%
		Cu 0,25% max	As - 0,08% max



Initial billet



CWR machine type:

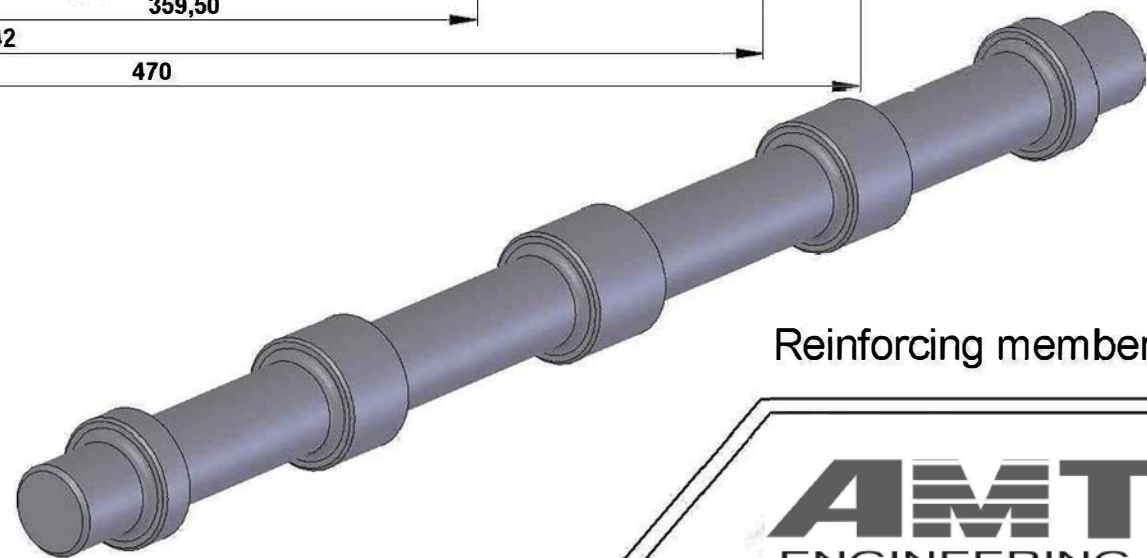
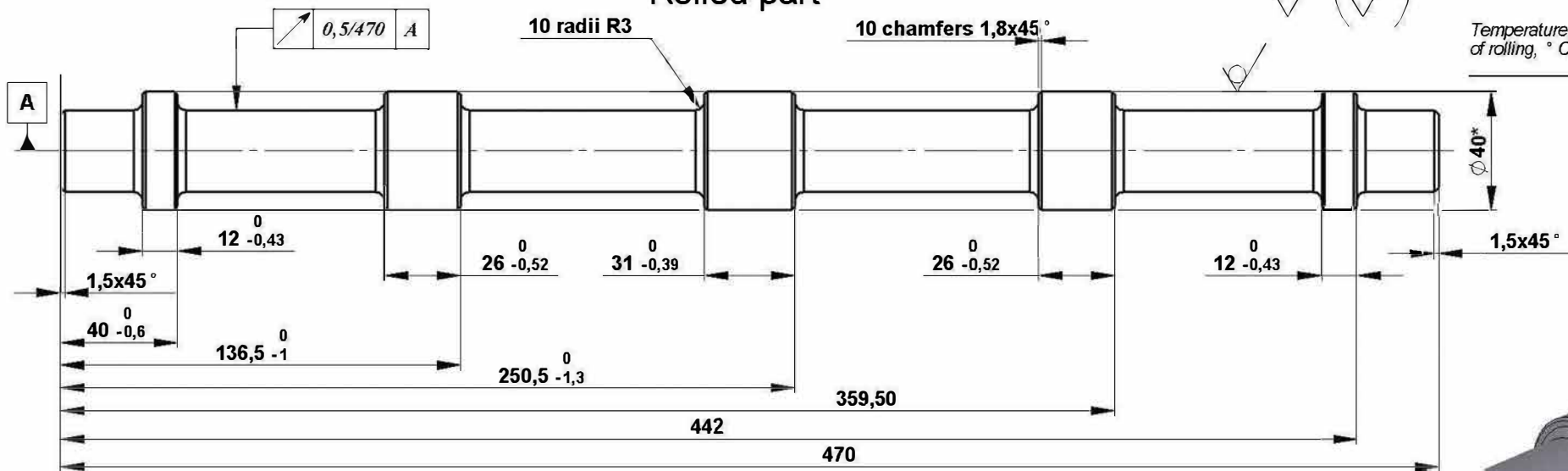
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part



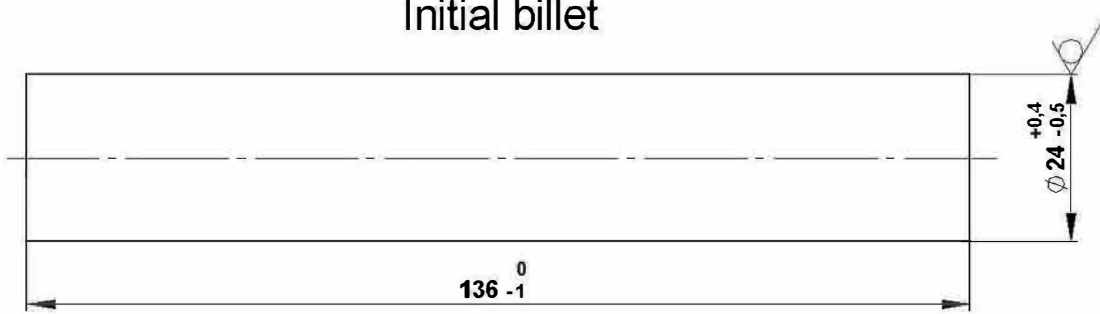
Reinforcing member

	Russia	Germany	USA
Material steel:	GOST 14959	DIN 17200	AISI 6150
	50ChFA	1.8159	ASTM A322

C-0,47...0,55%	Si-0,15...0,3%	Mn-0,3...0,6%
Cr-0,75...1,1%	V-0,15...0,25%	



Initial billet



CWR machine type:

Die length, mm:

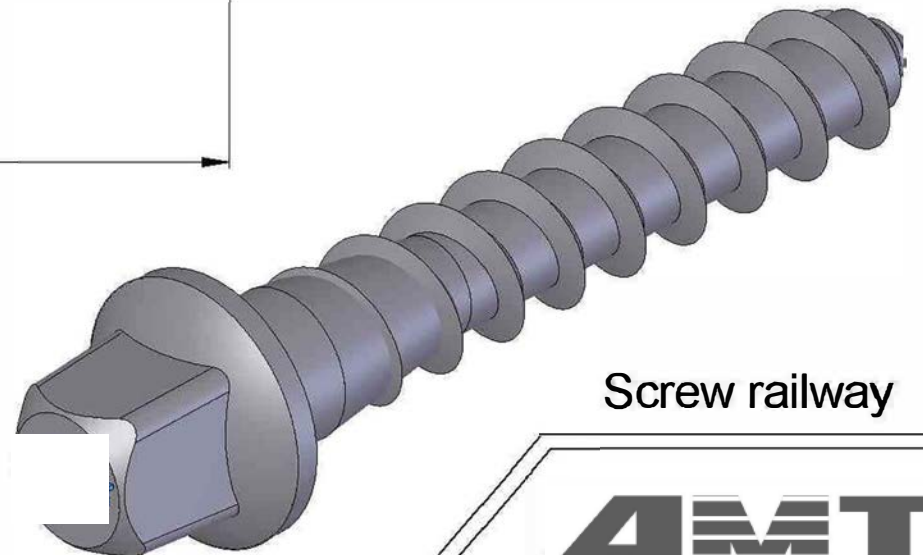
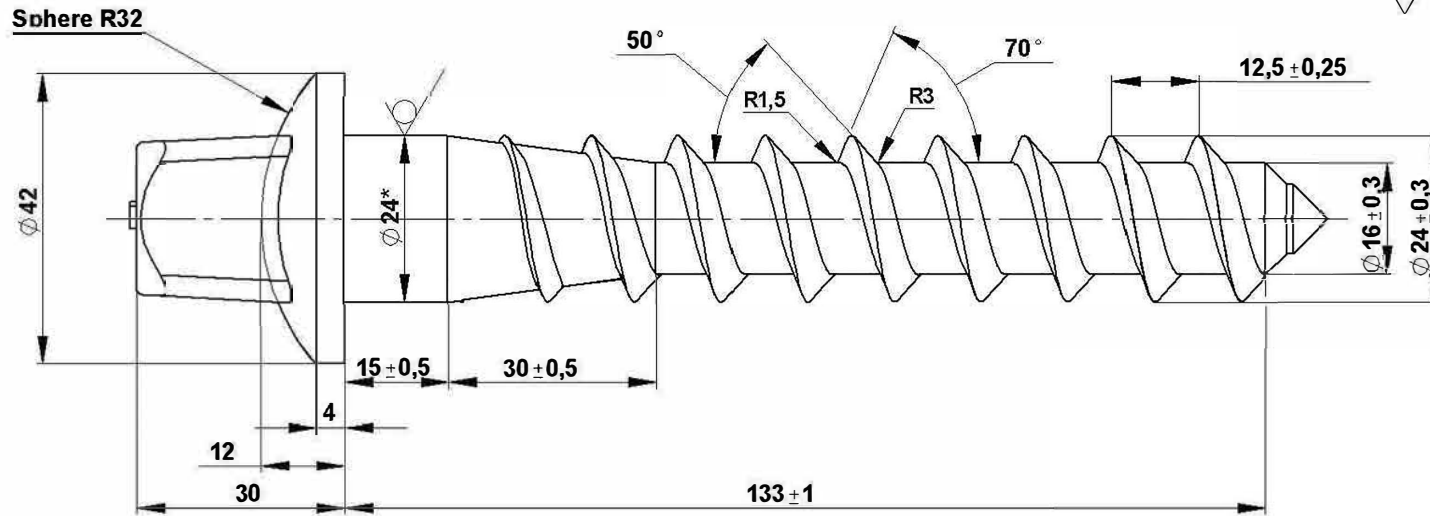
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Forged and rolled part

12,5 / (✓) (✓)



Screw railway

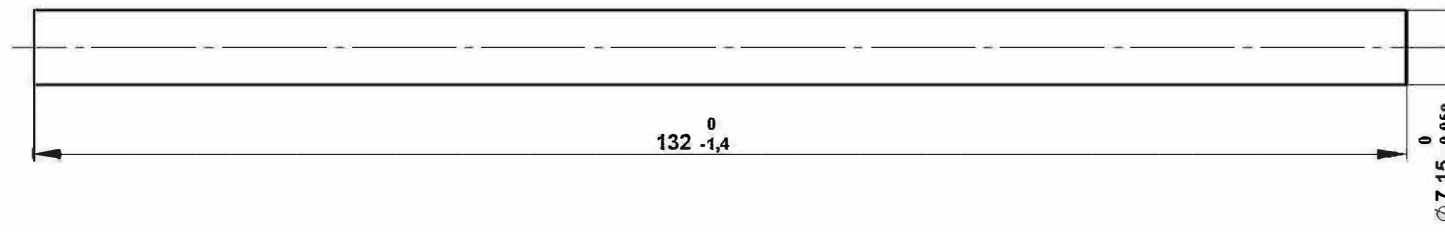
	Russia	Germany	USA
Material	GOST 1050	DIN	ASTM A322
steel:	45	1.6546	94B30

C - 0,42...0,50%	Si - 0,17...0,37%	Mn - 0,50...0,80%	Mo - 0,15...0,25%
Cr - 0,25% max	Ni - 0,25% max	Cu 0,25% max	As - 0,08% max



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Initial billet



CWR machine type:

Die length, mm:

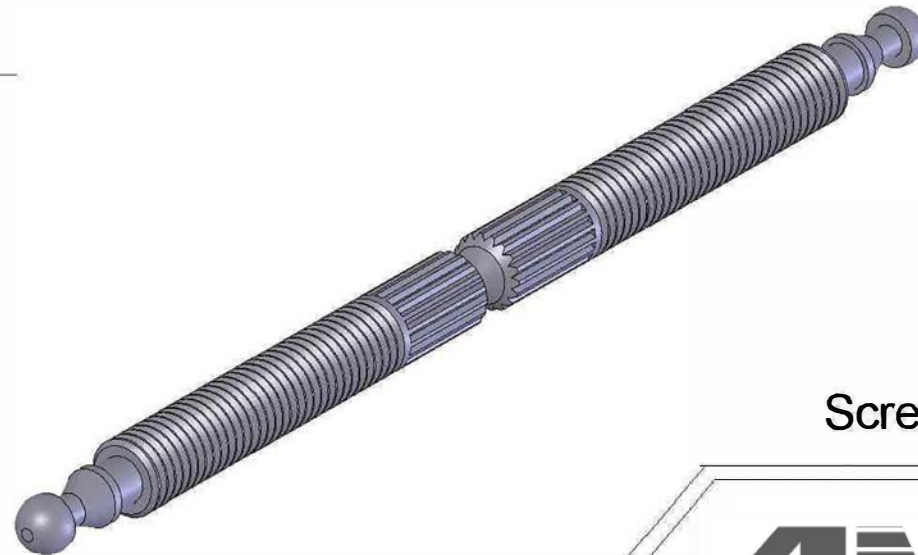
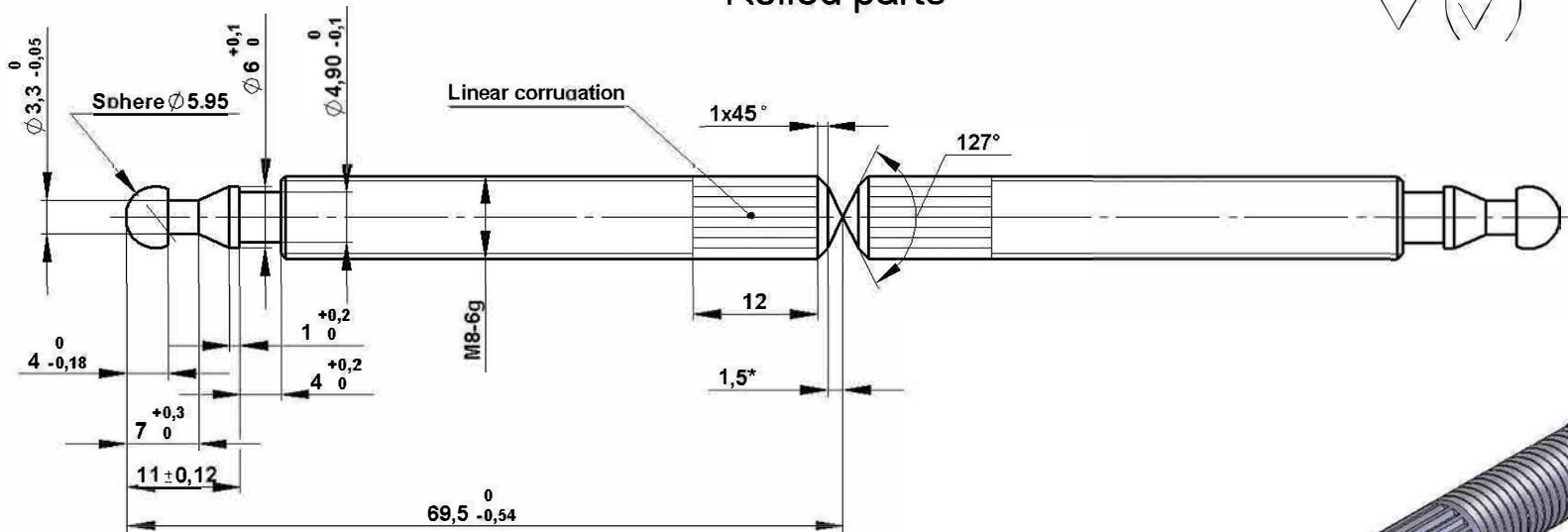
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts

3,2 / (✓)

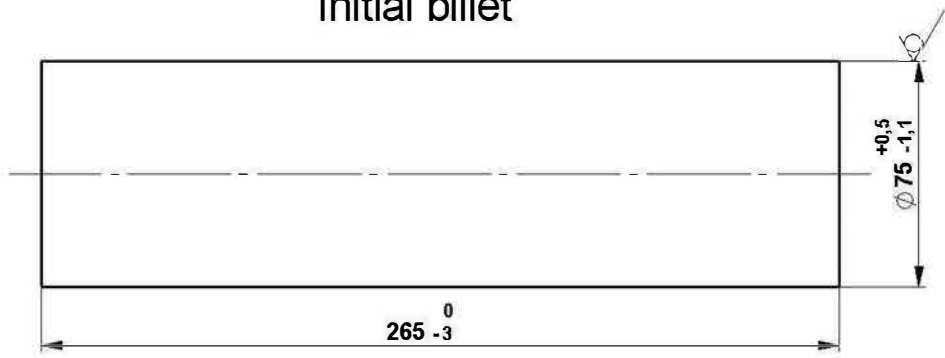


Screw

	Russia	Germany	USA
Material steel:	GOST 1050	DIN	AISI
	30	1.6545	8625

C - 0,27...0,35% Si - 0,17...0,37% Cr - 0,25% max As - 0,08% max
 Mn - 0,50...0,80% Ni - 0,25% max Cu - 0,25% max

Initial billet



CWR machine type:

Die length, mm:

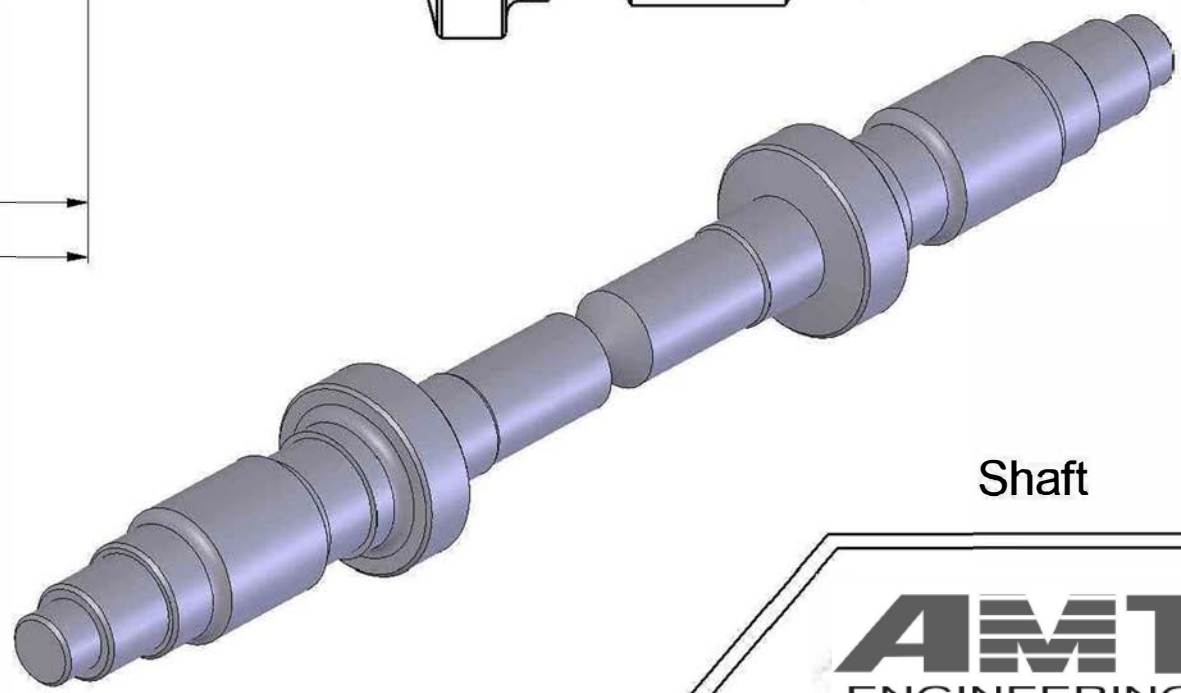
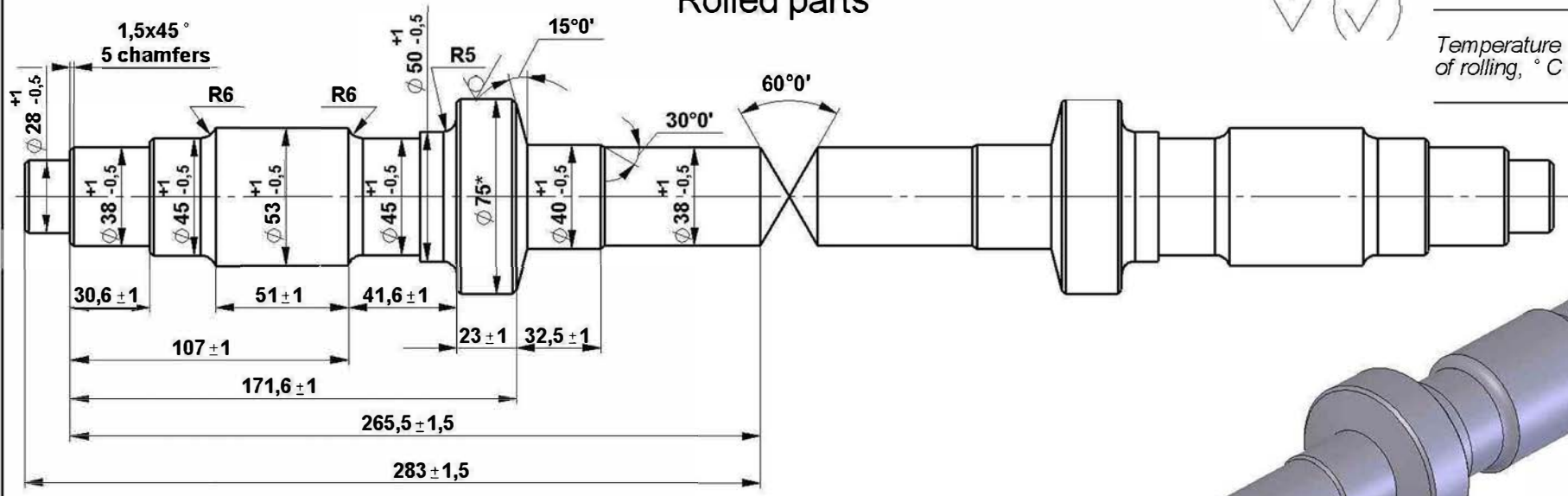
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, ° C:

12,5 (✓)

Rolled parts



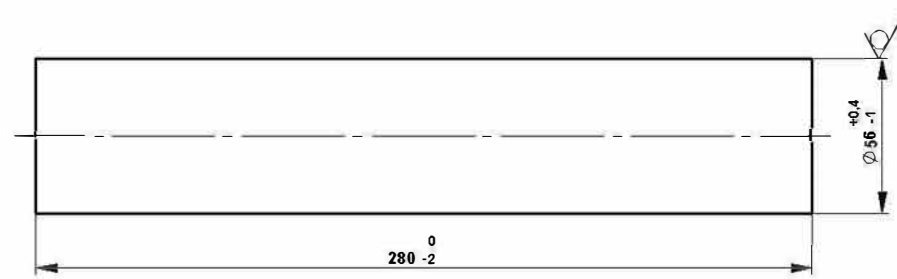
Shaft

	Russia	Germany	USA
Material	GOST 4543	DIN 17210	AISI 8620H
steel:	20ChGNM	1.6523	ASTM A304

C - 0,18...0,23%	Si - 0,17...0,37%	Mo - 0,15...0,35
Cr - 0,40...0,70%	Ni - 0,40...0,70	Mn - 0,70...1,10%



Initial billet



CWR machine type:

Die length, mm:

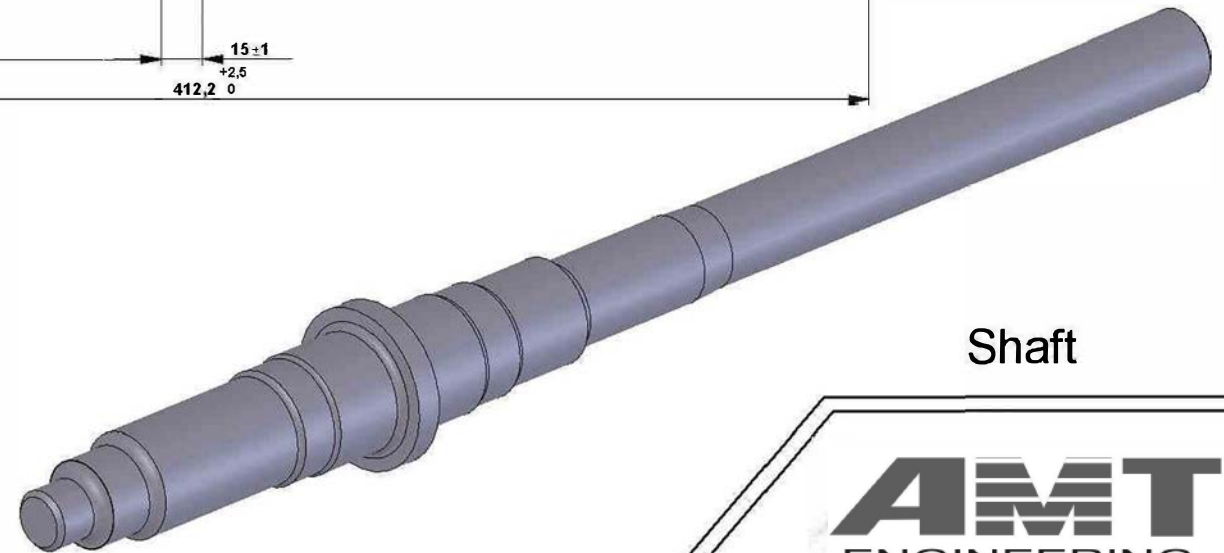
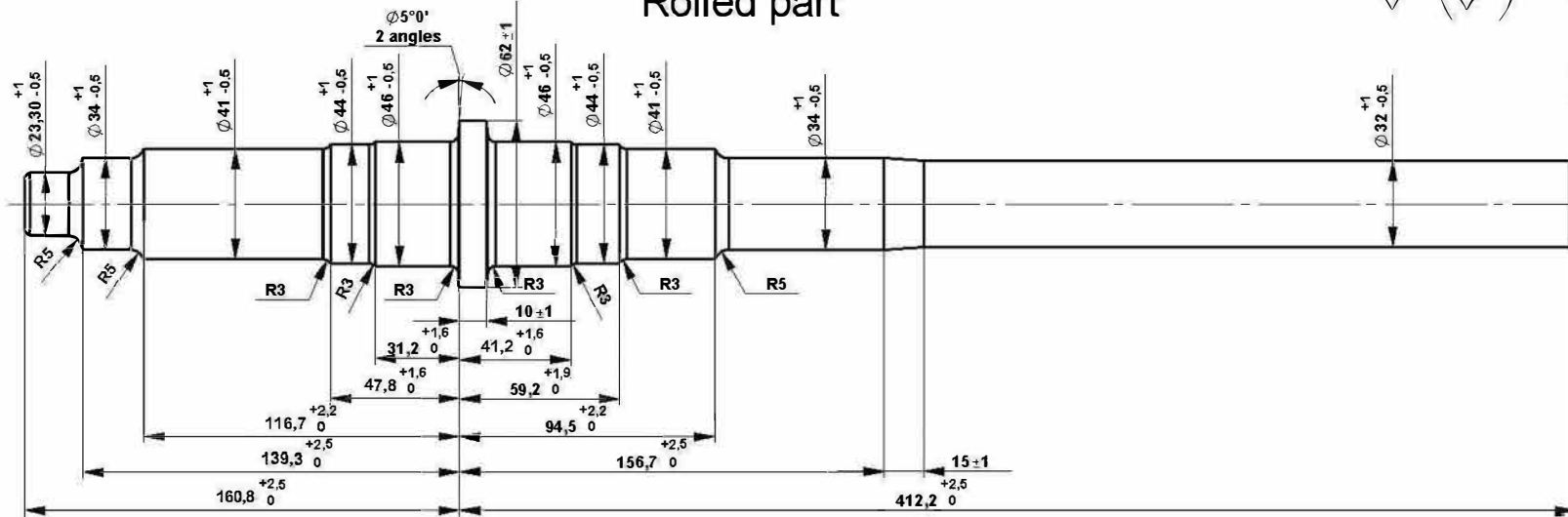
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part

12,5 (✓) (✓)



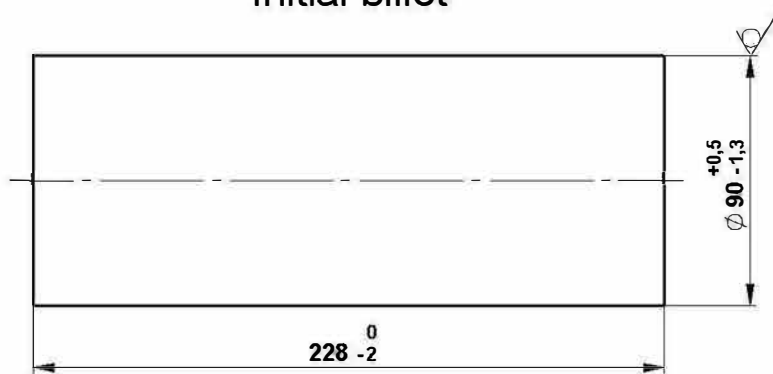
Shaft

	Russia	Germany	USA
Material	GOST 4543	DIN 17210	AISI 8620H
steel:	20ChGNM	1.6523	ASTM A304

C - 0,18...0,23%	Si - 0,17...0,37%	Mn - 0,15...0,35
Cr - 0,40...0,70%	Ni - 0,40...0,70	Mn - 0,70...1,10%

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Initial billet



CWR machine type:

Die length, mm:

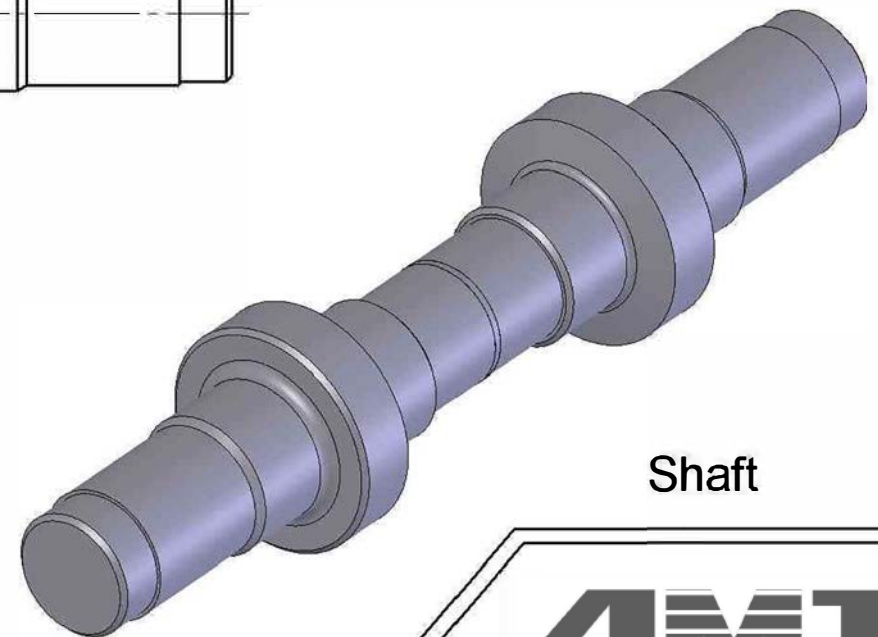
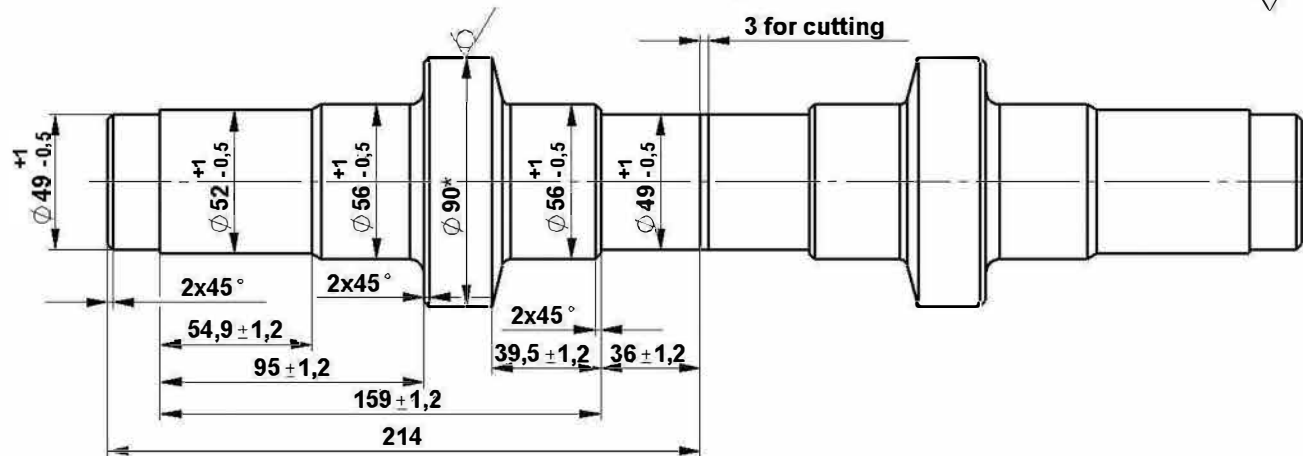
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part

12,5 / (✓)



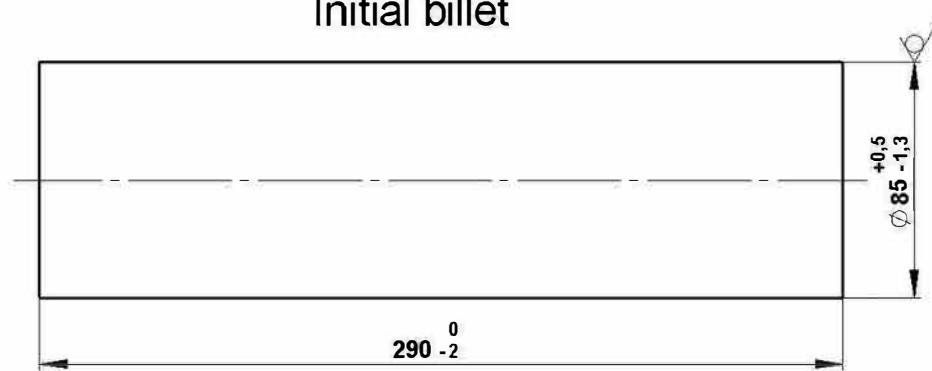
Shaft

	Russia	Germany	USA
Material	GOST 4543	DIN	SEA J1268
steel:	40ChN	1.6562	E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
 Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max



Initial billet



CWR machine type:

Die length, mm:

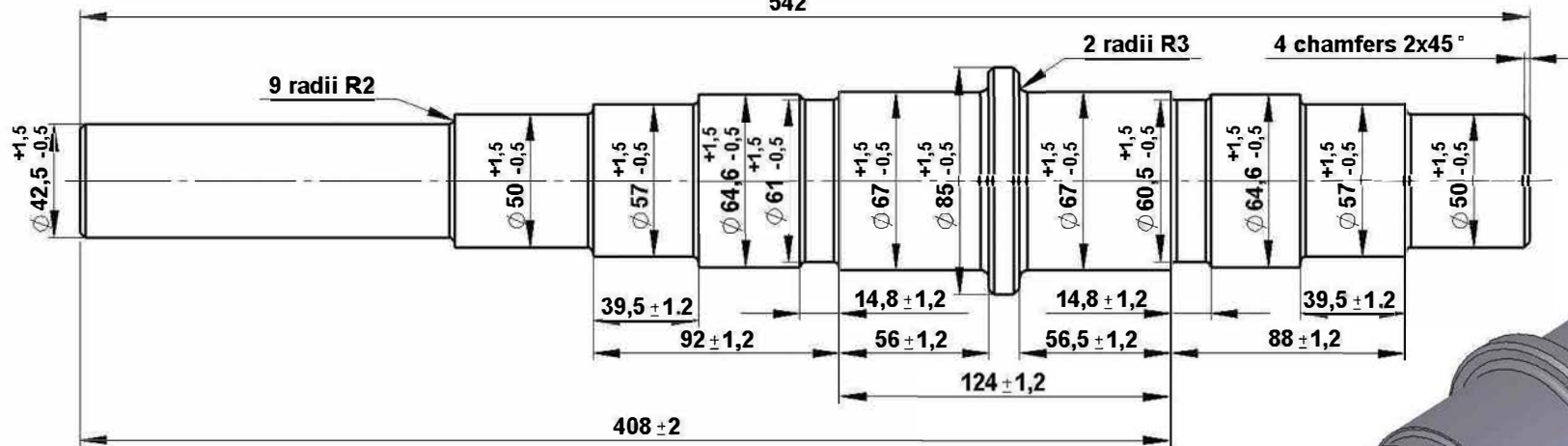
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, ° C:

Rolled part

542



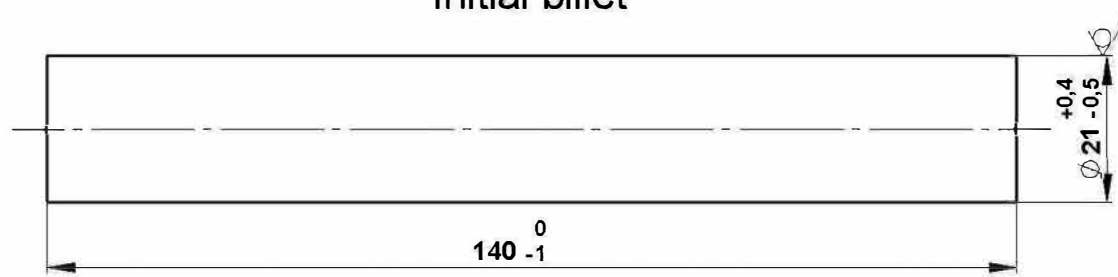
Shaft

	Russia	Germany	USA
Material	GOST 4543	DIN 17210	ASTM A304
steel:	20XГНМ	1.6523	AISI 8620H

C - 0,18...0,23% Si - 0,17...0,37% Mn - 0,70...1,10%
 Cr - 0,40...0,70% Ni - 0,40...0,70% Mo - 0,15...0,35%



Initial billet



CWR machine type:

Die length, mm:

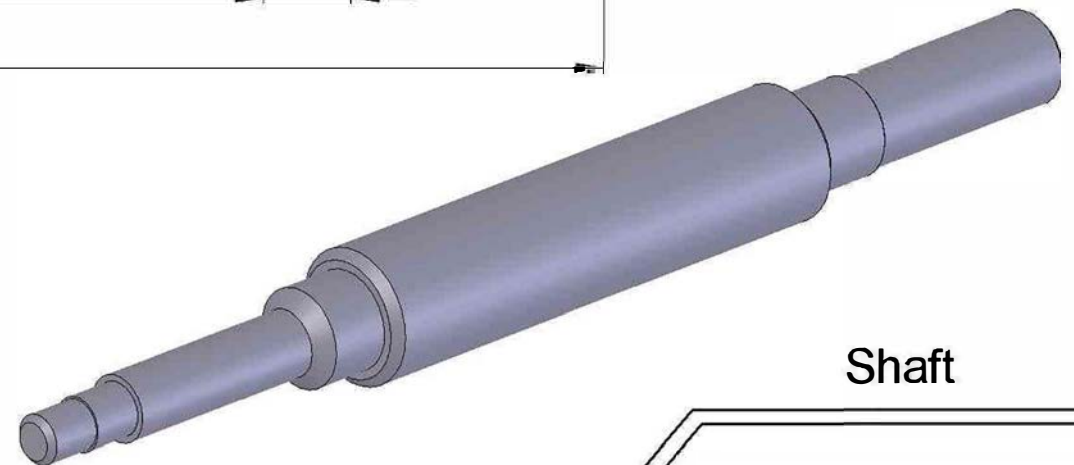
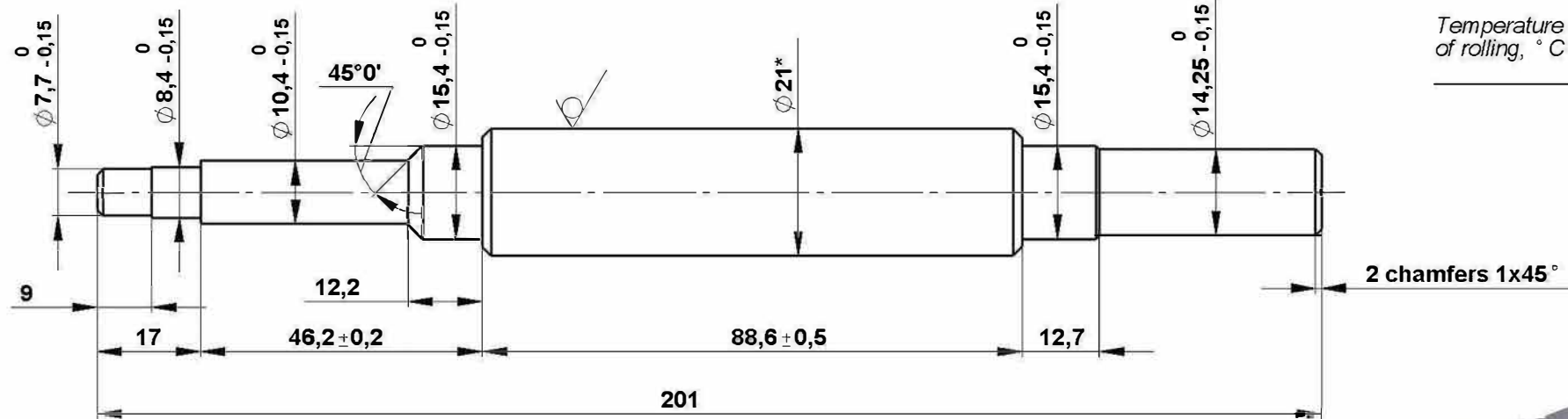
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part

6,3 (✓)



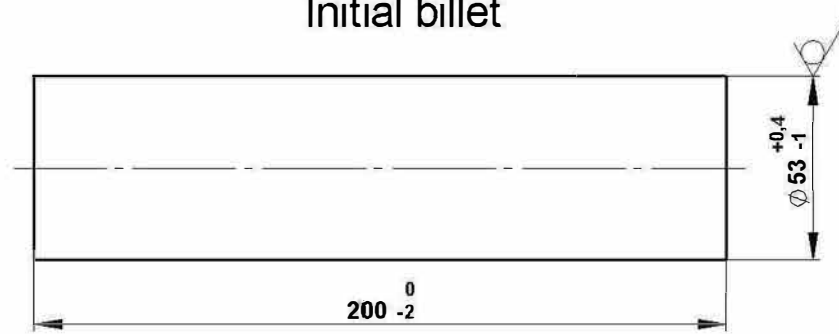
Shaft

	Russia	Germany	USA
Material steel:	GOST 1050 45	DIN 1.6546	ASTM A322 94B30

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,50...0,80%

Cr - 0,25% max Ni - 0,25% max Cu 0,25% max As - 0,08% max

Initial billet



CWR machine type:

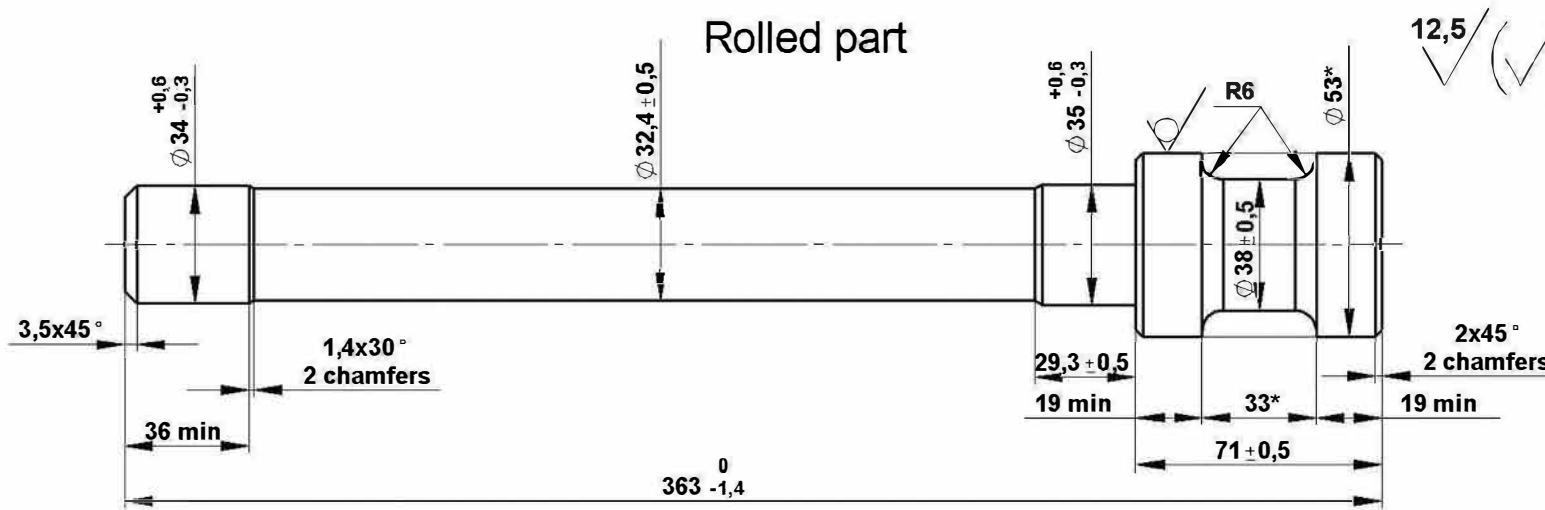
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part



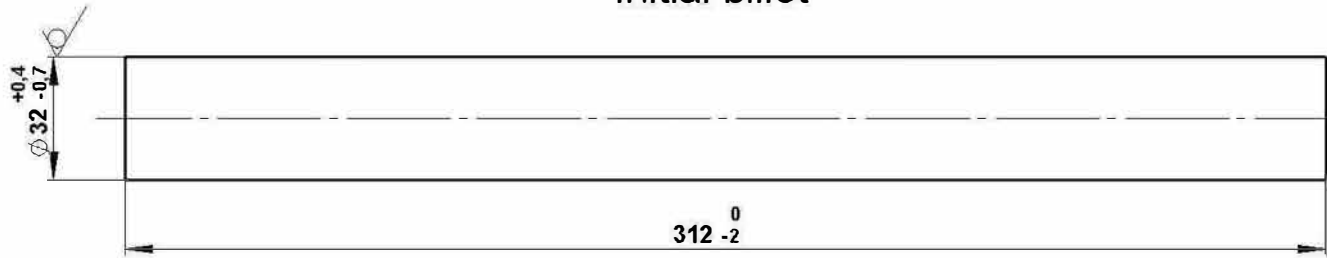
Shaft

	Russia	Germany	USA
Material steel:	GOST 14959	DIN 17200	AMS
	50ChFA	1.6511	6450

C - 0,46...0,54% Cr - 0,80...1,10% Mn - 0,50...0,80% V - 0,1...0,2%
 Cr - 0,17...0,37% Ni - 0,25% max Cu - 0,2% max



Initial billet



CWR machine type: _____

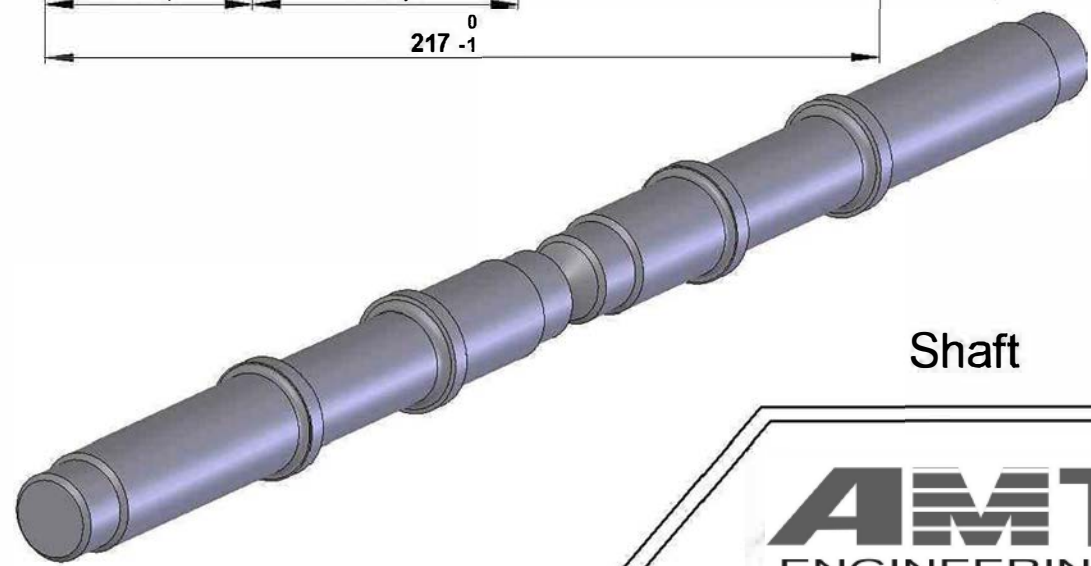
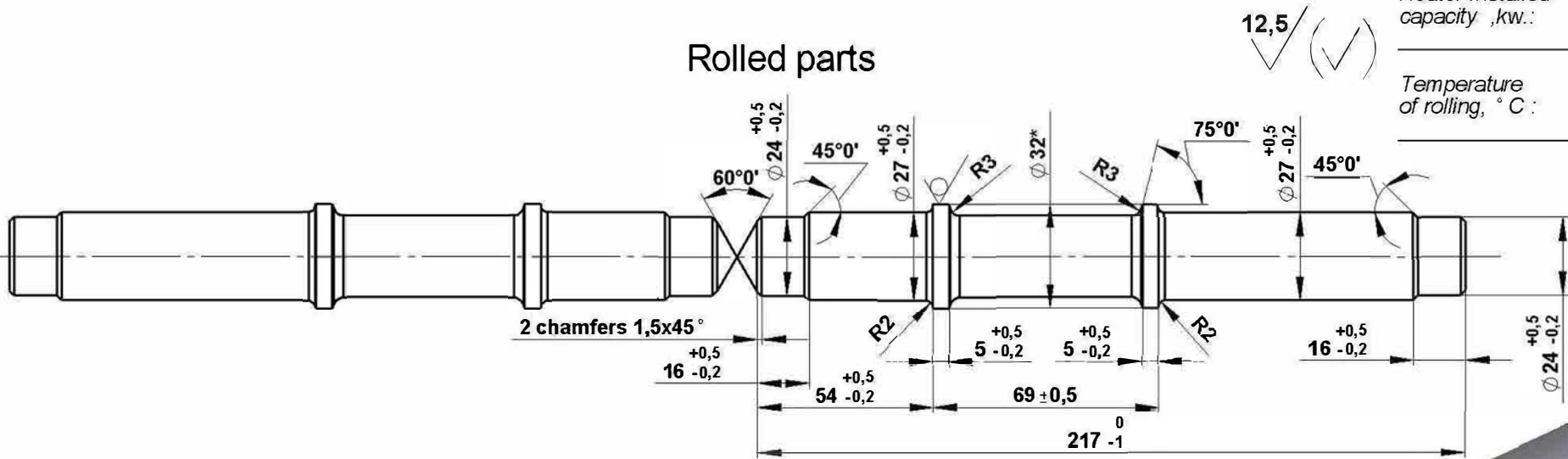
Die length, mm: _____

Output production, pcs/h: _____

Heater Installed capacity, kw.: _____

Temperature of rolling, ° C: _____

Rolled parts



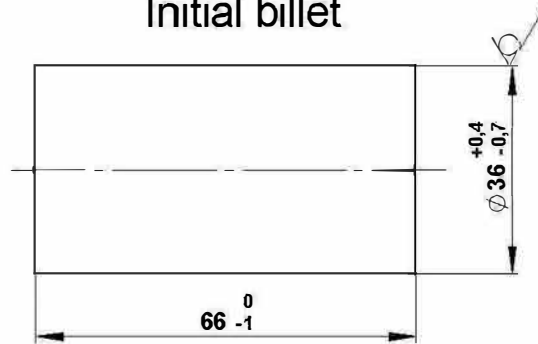
Shaft

	Russia	Germany	USA
Material	GOST 4543	DIN	SEA J1268
steel:	40ChN	1.6562	E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
 Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max



Initial billet



CWR machine type:

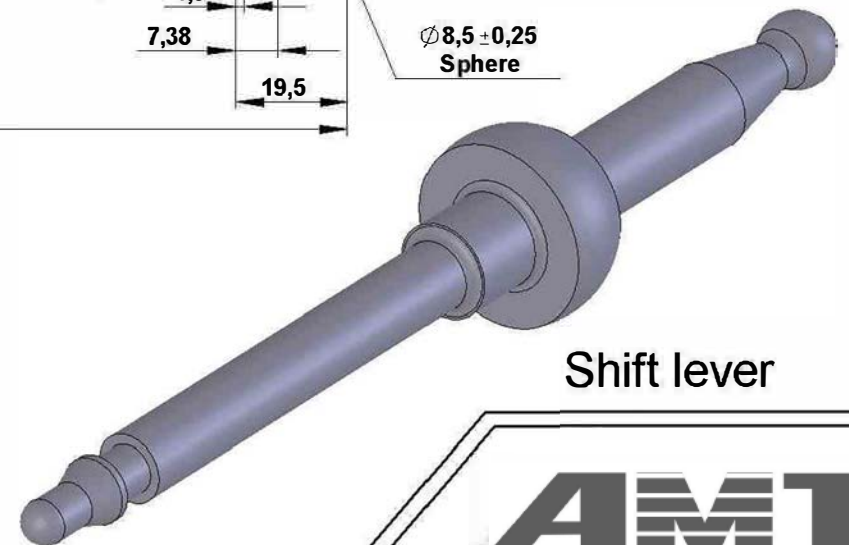
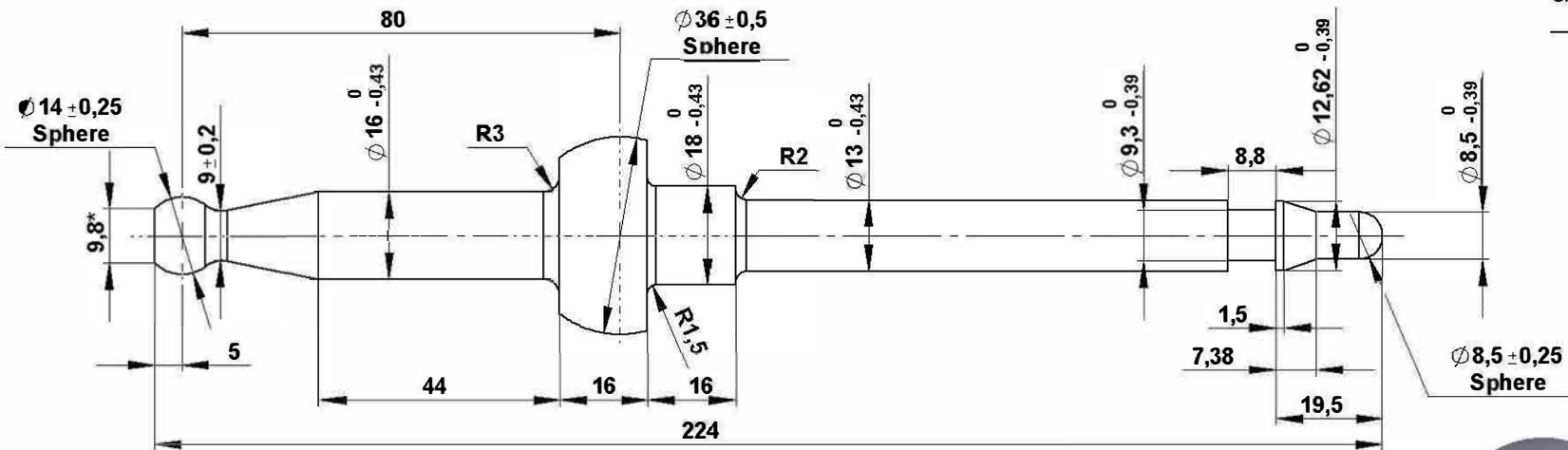
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part



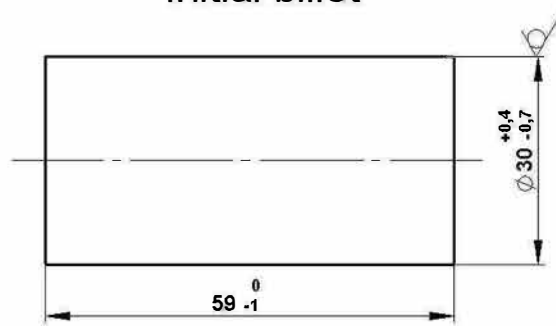
Shift lever

	Russia	Germany	USA
Material steel:	GOST 4543 30Ch	DIN 17115 1.6522	AMS 6365 4135

C - 0,24...0,32% Si - 0,17...0,37% Mn - 0,50...0,80%
Cr - 0,80...1,10% Ni - 0,30% max Cu - 0,30% max



Initial billet



CWR machine type:

Die length, mm:

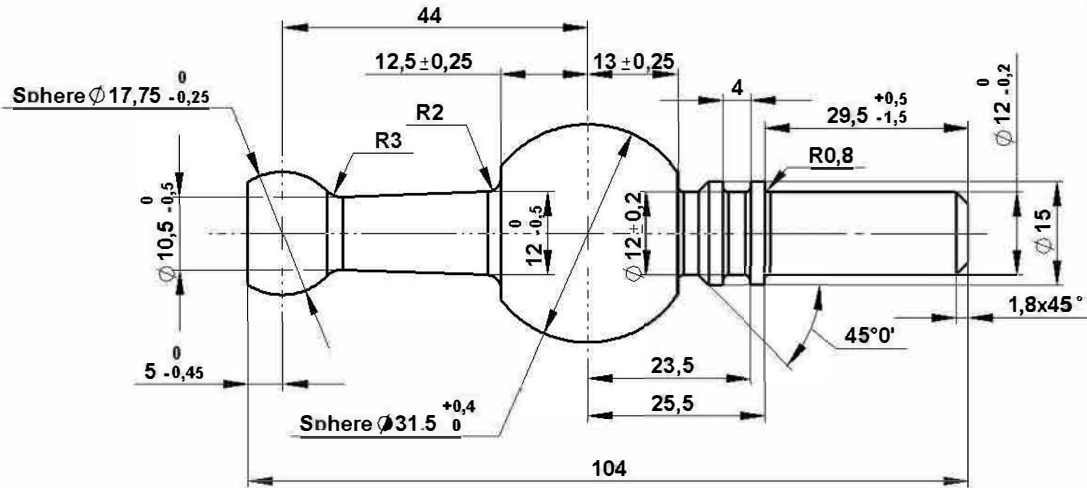
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled part

6,3 (✓)

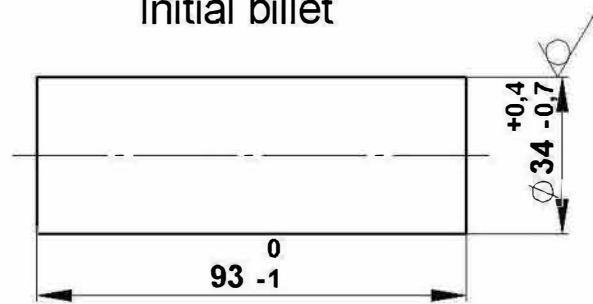


Shift lever

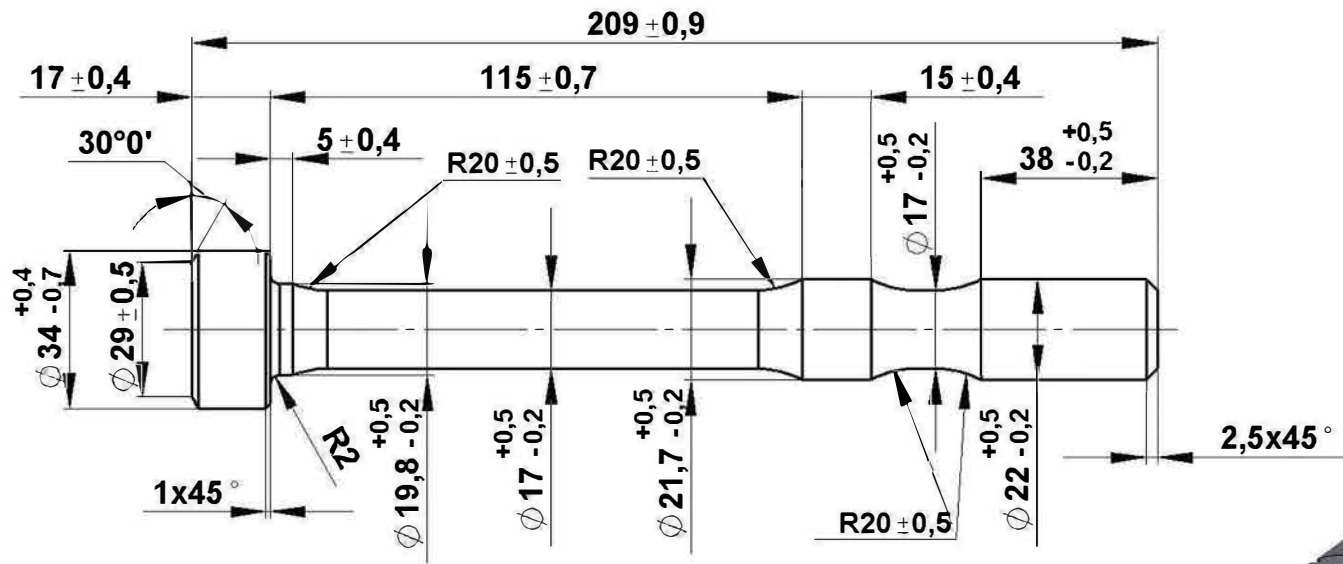
	Russia	Germany	USA
Material steel:	GOST 4543 40ChN	DIN 1.6562	SEA J1268 E4340H
	C - 0,36...0,44%	Si - 0,17...0,37%	Mn - 0,50...0,80%
	Cr - 0,45...0,75%	Ni - 1,00...1,40%	Cu - 0,30%max



Initial billet



Rolled part



6,3 (✓) (✓)

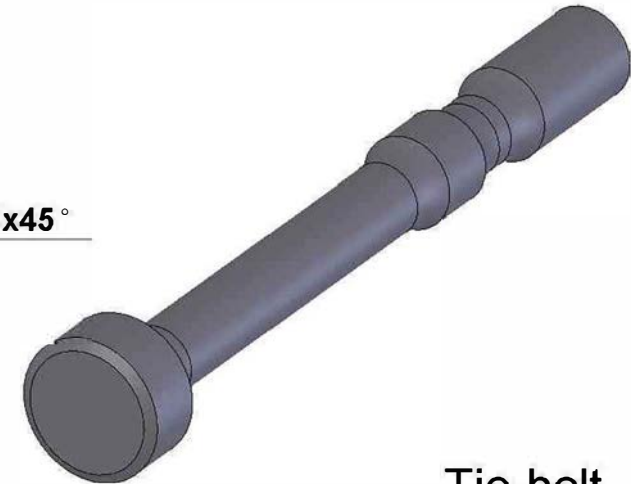
CWR machine type:

Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:



Tie-bolt

	Russia	Germany	USA
Material steel:	GOST 4543 38ChGNM	DIN 1.6562	AISI 4340 ASTM A29

C - 0,35...0,43% Ni - 0,7...1,0% Mo - 0,15...0,25%
 Cr - 0,50...0,80% Mn - 0,8...1,1%
 Si - 0,17...0,37% Cu - 0,3% max

Initial billet



CWR machine type:

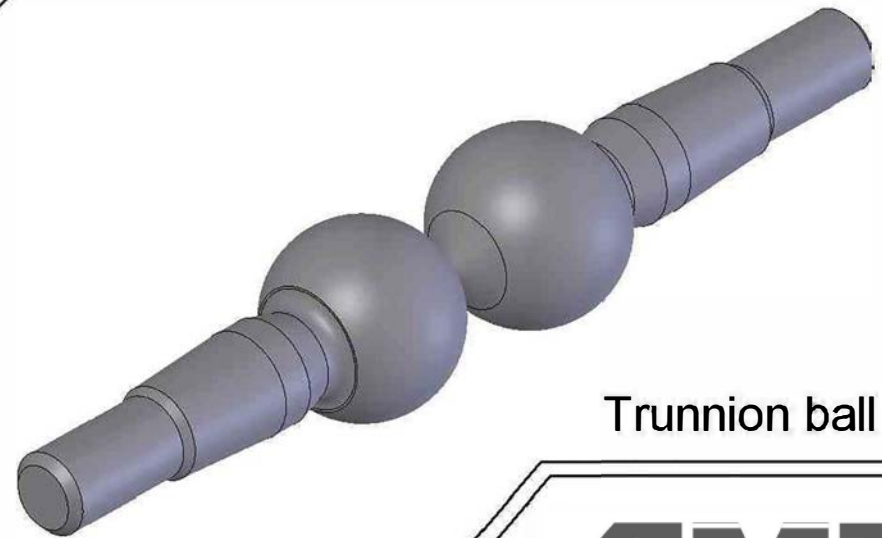
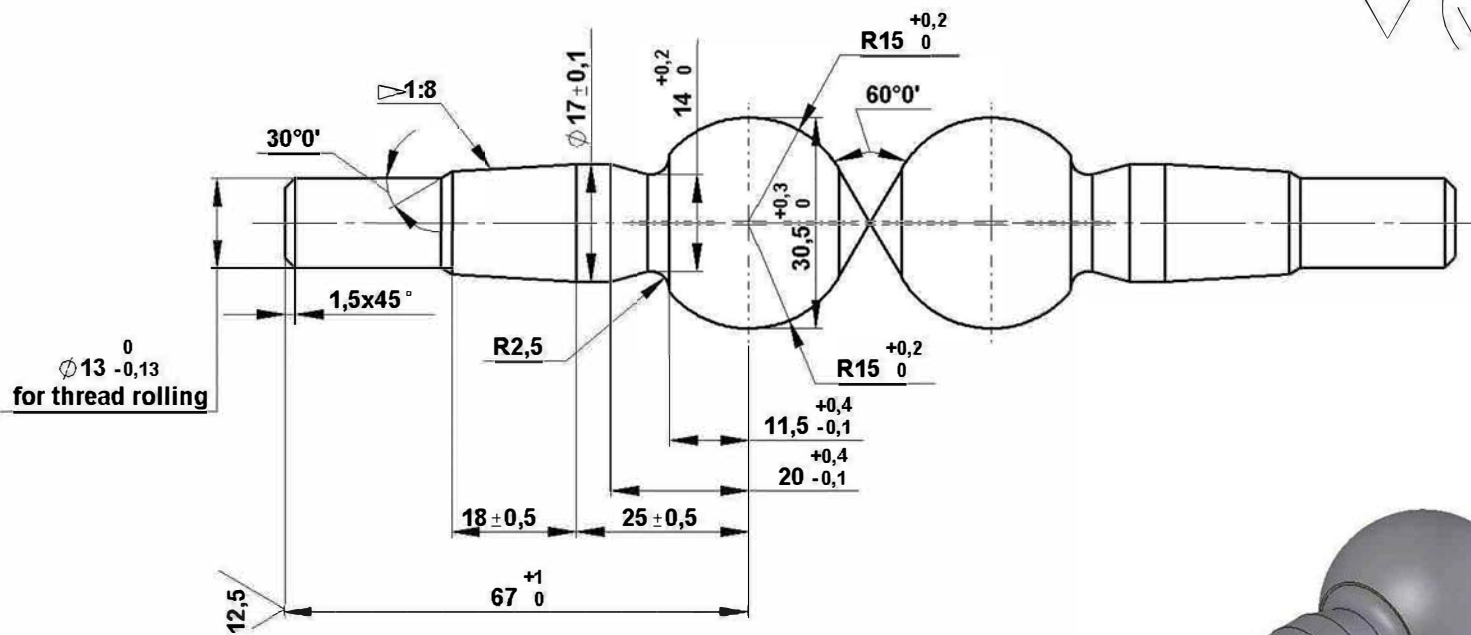
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts



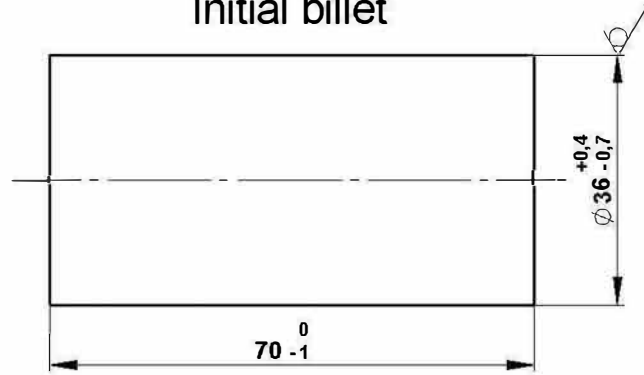
Trunnion ball

	Russia	Germany	USA
Material	GOST 4543	DIN	SEA J1268
steel:	40ChN	1.6562	E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
 Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max



Initial billet



CWR machine type:

Die length, mm:

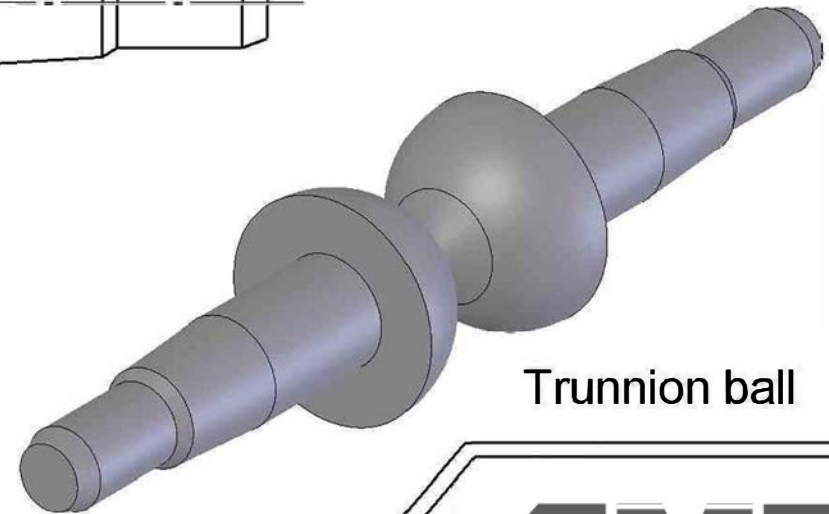
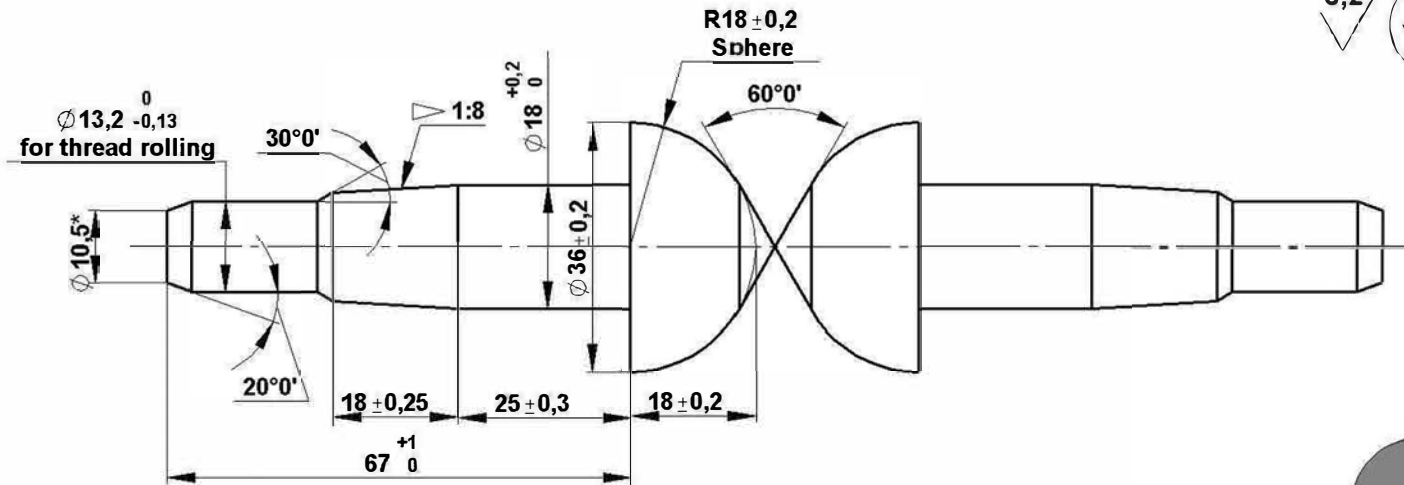
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts

3,2 (✓)

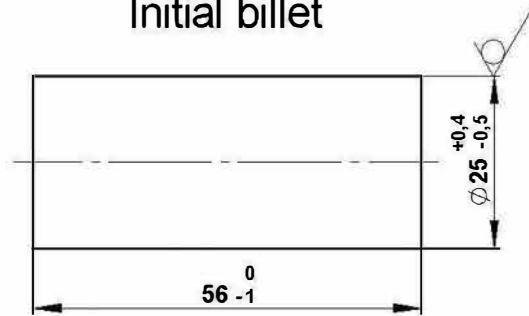


Trunnion ball

	Russia	Germany	USA
Material steel:	GOST 4543 40ChN	DIN 1.6562	SEA J1268 E4340H

C - 0,36...0,44% Si - 0,17...0,37% Mn - 0,50...0,80%
Cr - 0,45...0,75% Ni - 1,00...1,40% Cu - 0,30%max

Initial billet



CWR machine type:

Die length, mm:

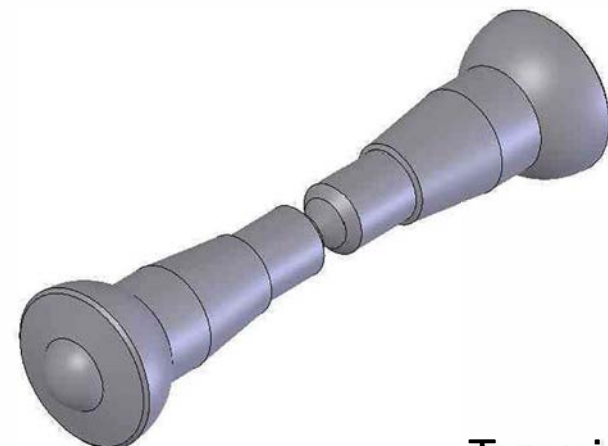
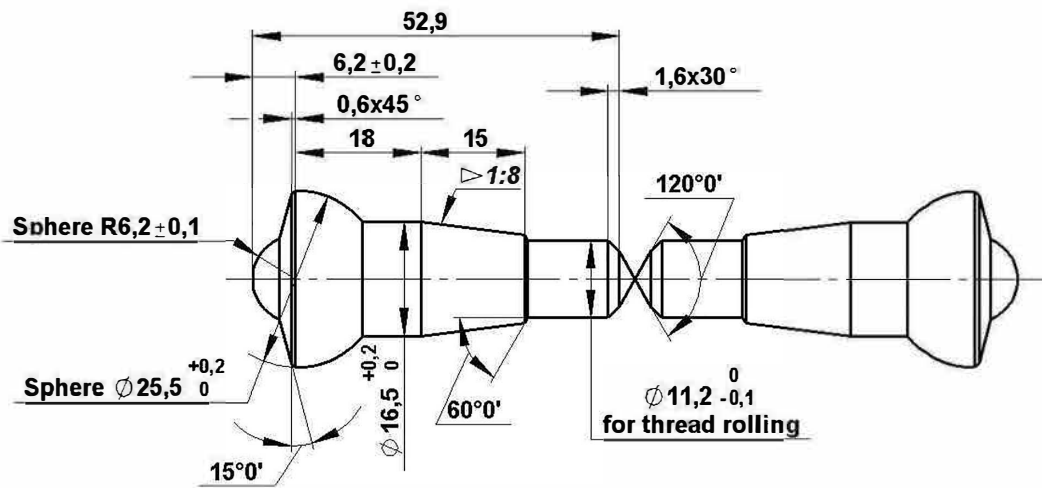
Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, ° C:

Rolled parts

3,2 (✓) (✓)



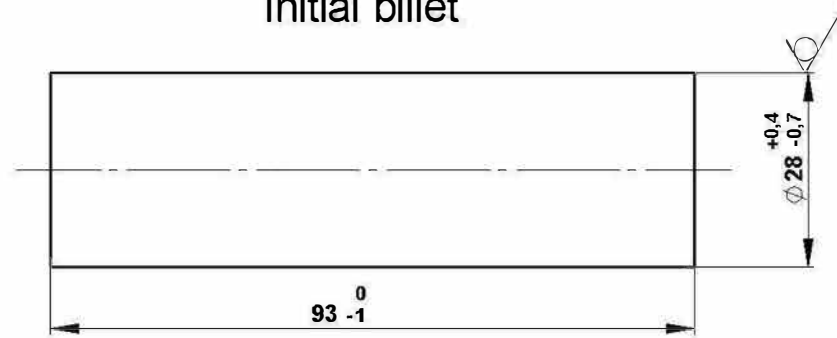
Trunnion ball

	Russia	Germany	USA
Material	GOST 1050	DIN 17140	1040
steel:	45	1.0541	ASTM A866

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,5...0,8%
 Cr - 0,25% max Cu - 0,25% max Ni - 0,25% max



Initial billet



CWR machine type:

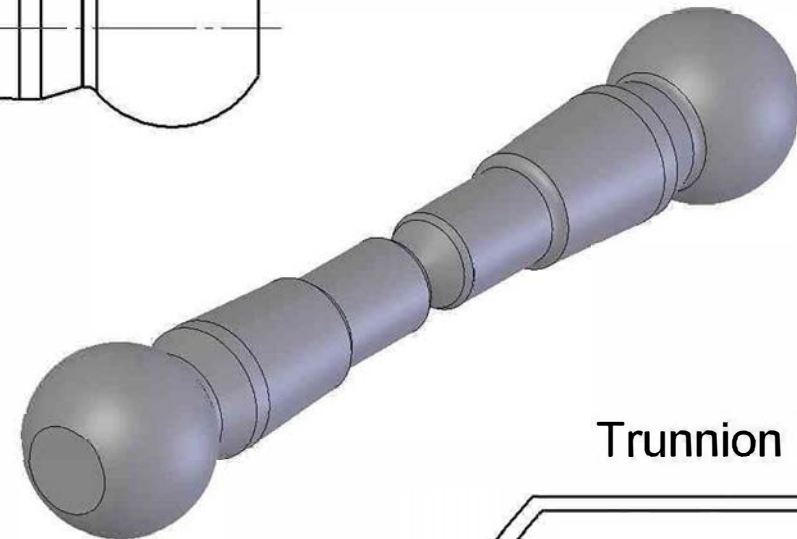
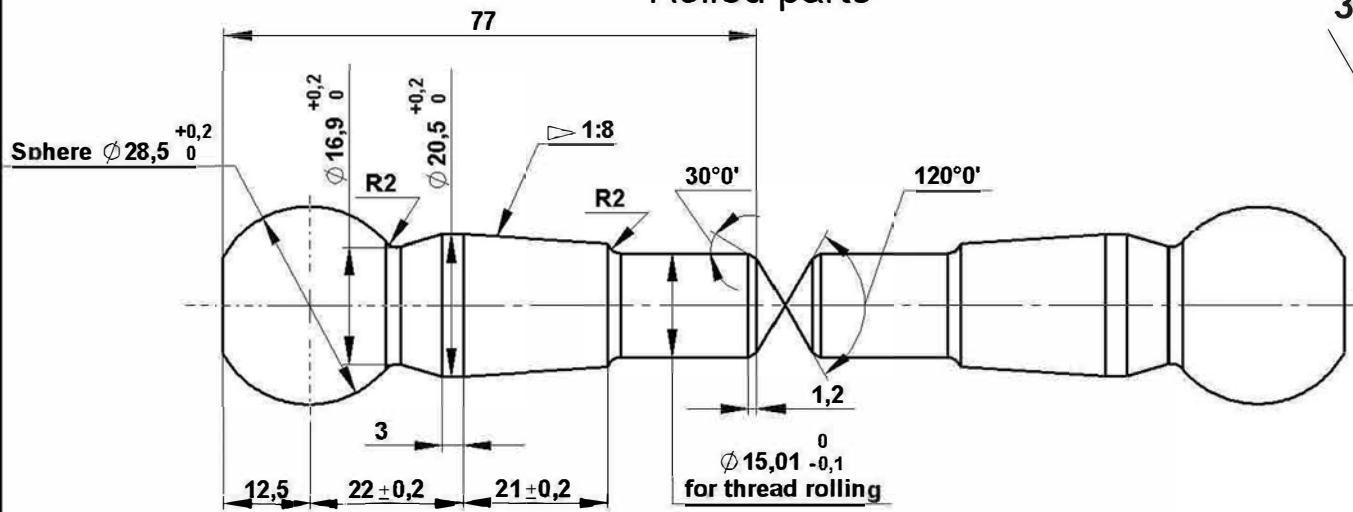
Die length, mm:

Output production, pcs/h:

Heater Installed capacity, kw.:

Temperature of rolling, °C:

Rolled parts



Trunnion ball

	Russia	Germany	USA
Material	GOST 1050	DIN 17140	1040
steel:	45	1.0541	ASTM A866

C - 0,42...0,50% Si - 0,17...0,37% Mn - 0,5...0,8%
 Cr - 0,25% max Cu - 0,25% max Ni - 0,25% max



Initial billet



CWR machine type :

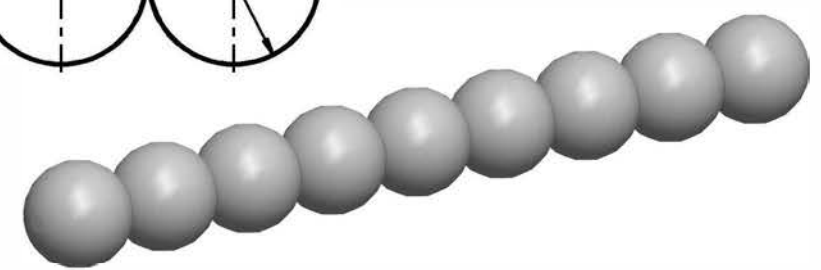
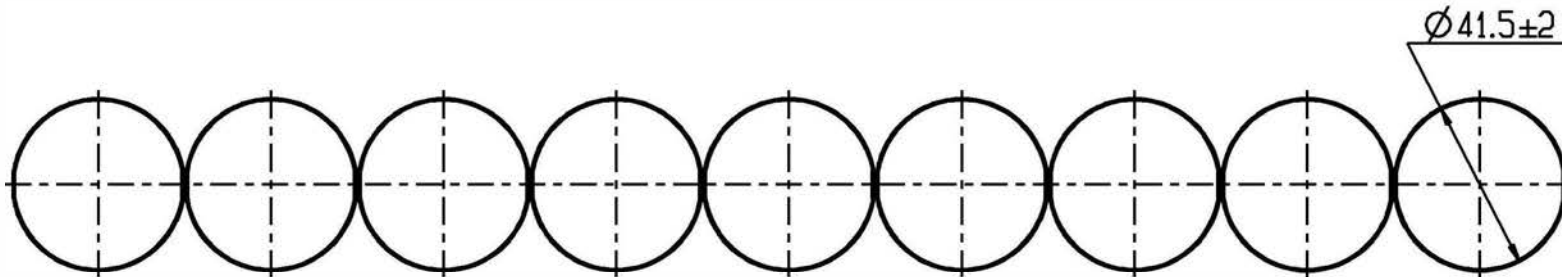
Die length, mm :

Output production, pcs/h :

Heater installed capacity, kW :

Temperature of rolling, °C :

Rolled part

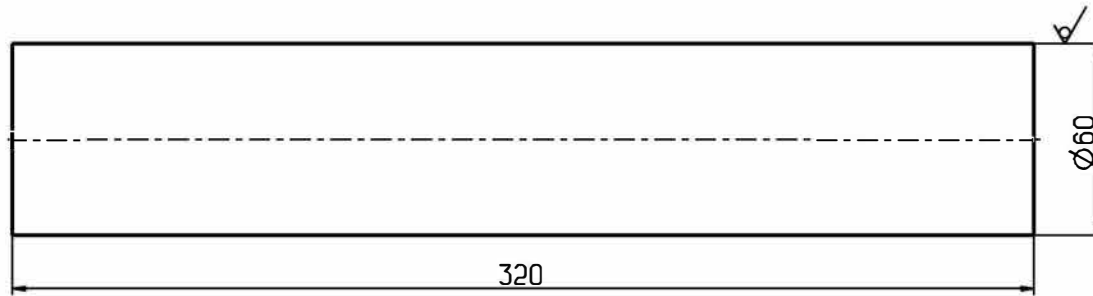


Ball

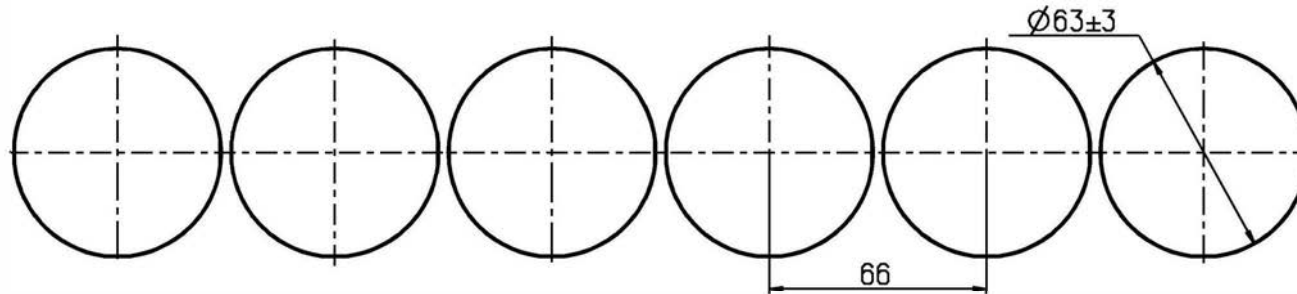
Material steel:	<i>Russia</i> ШХ 15 GOST 801	<i>Germany</i> 1.3505 DIN	<i>USA</i> 52100 ASTM
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Initial billet



Rolled part



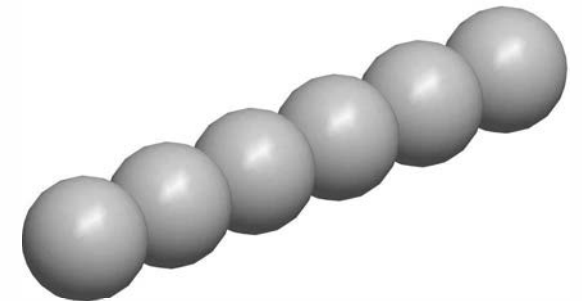
CWR machine type :

Die length, mm :

Output production, pcs/h :

Heater installed capacity, kW :

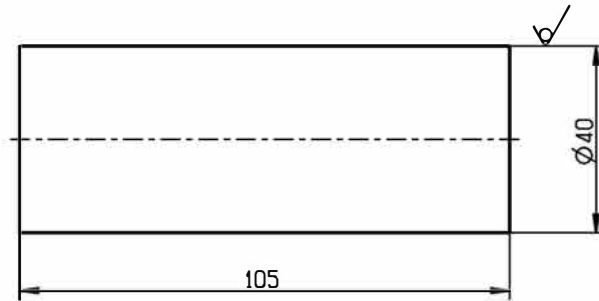
Temperature of rolling, °C :



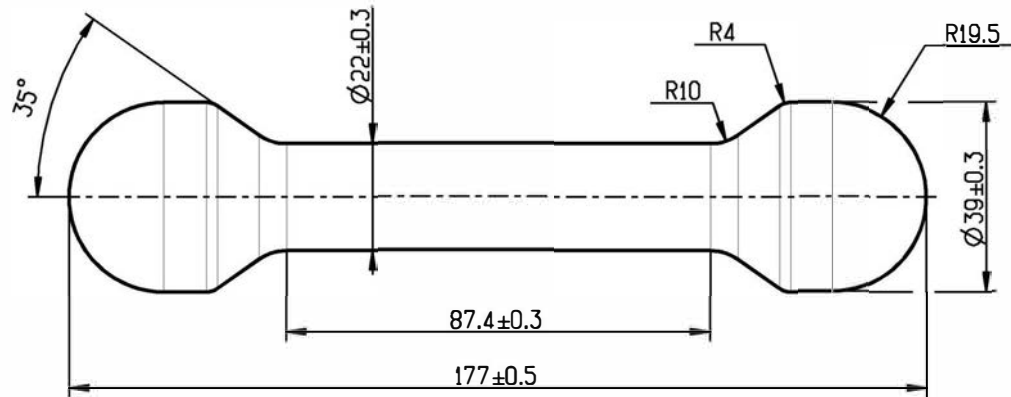
Ball

Material steel:	<i>Russia</i>	<i>Germany</i>	<i>USA</i>
	УХ 15 GOST 801	1.3505 DIN	52100 ASTM

Initial billet



Rolled part



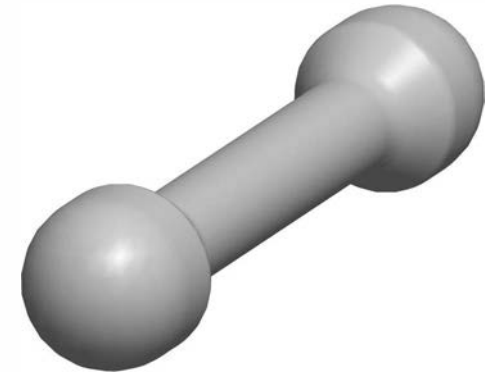
CWR machine type : _____

Die length, mm : _____

Output production, pcs/h : _____

Heater installed capacity, kW : _____

Temperature of rolling, $^\circ\text{C}$: _____

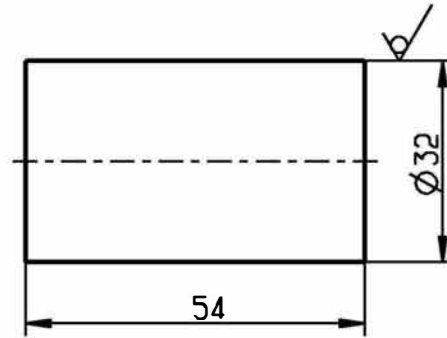


Drop link

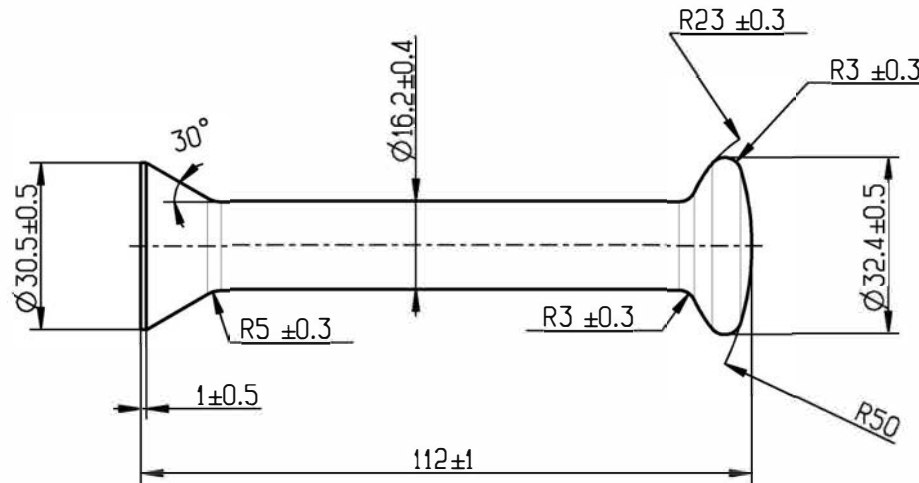
Material steel:	Russia	Germany	USA
	20 GOST 1050	1.0402 DIN	1020 ASTM

AMT
ENGINEERING

Initial billet



Rolled part



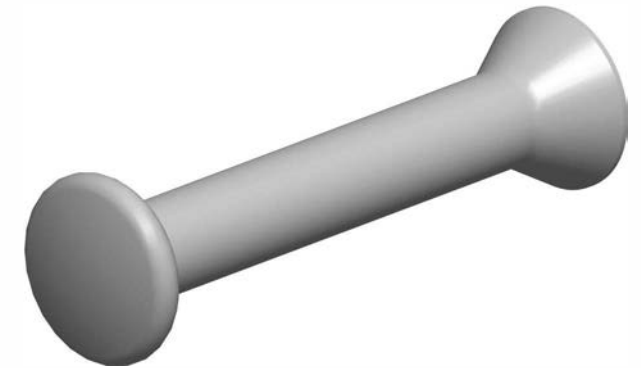
CWR machine type :

Die length, mm :

Output production, pcs/h :

Heater installed
capacity, kW :

Temperature of rolling, °C :

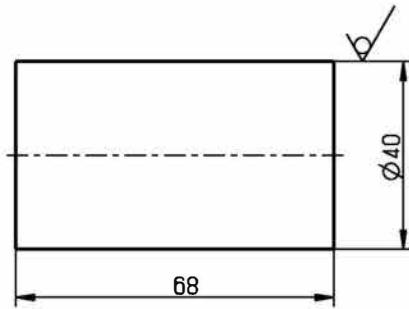


Insulator core

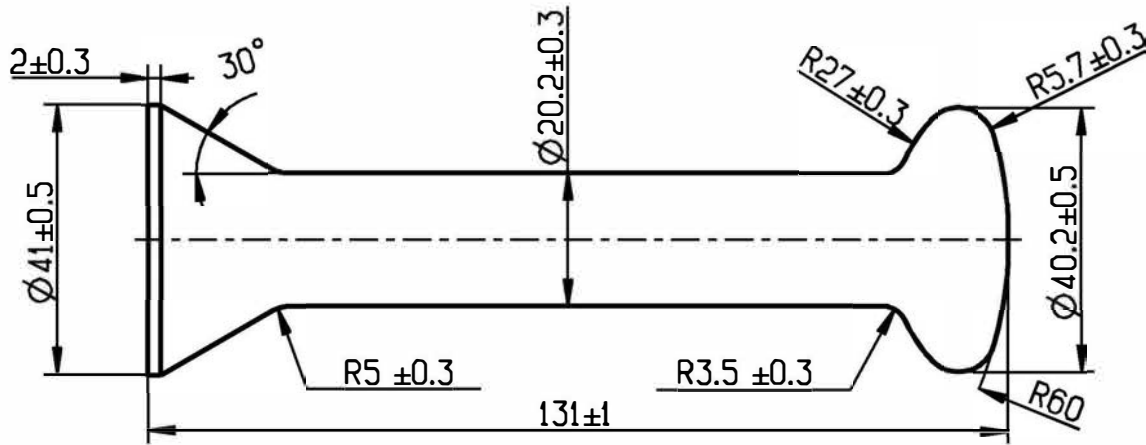
Material steel:	Russia	Germany	USA
	40X GOST 4543	1.7035 DIN	5140 ASTM A29

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Initial billet



Rolled part



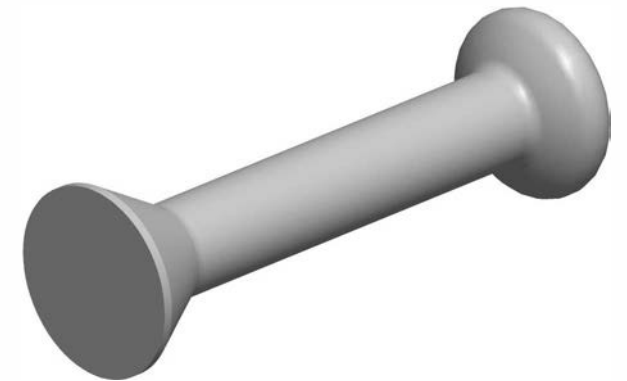
CWR machine type : _____

Die length, mm : _____

Output production, pcs/h : _____

Heater installed capacity, kW : _____

Temperature of rolling, °C : _____

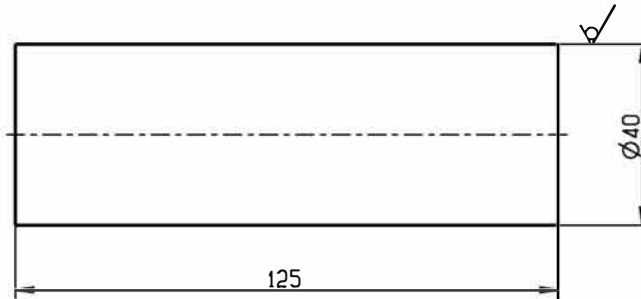


Insulator core

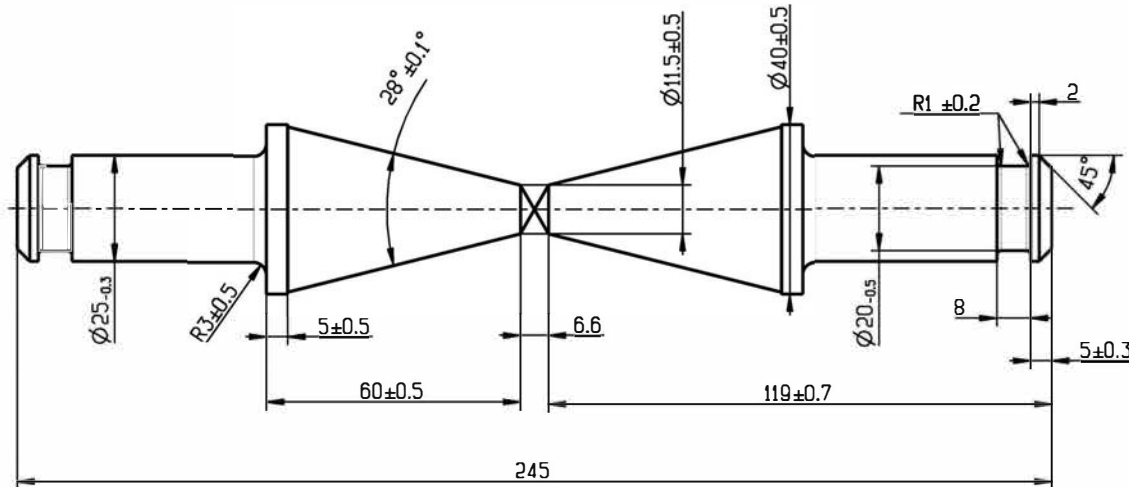
Material steel:	Russia	Germany	USA
	40X GOST 4543	1.7035 DIN	5140 ASTM A29

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Initial billet



Rolled part



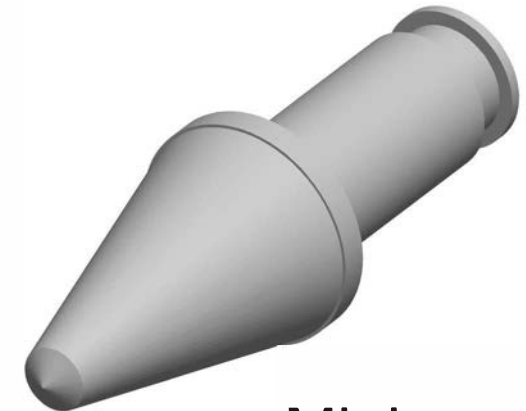
CWR machine type : _____

Die length, mm : _____

Output production, pcs/h : _____

Heater installed capacity, kW : _____

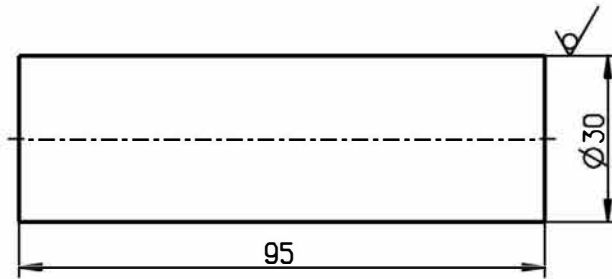
Temperature of rolling, °C : _____



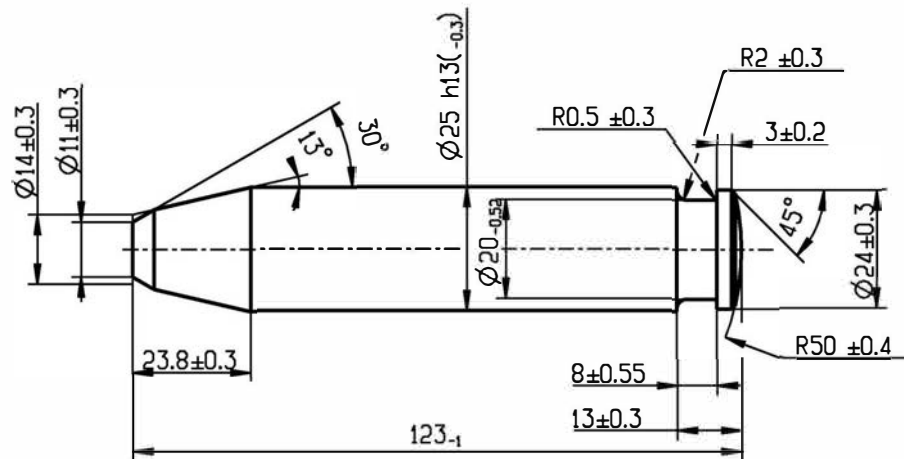
Mining cutter

Material steel:	Russia	Germany	USA
	40X GOST 4543	1.7035 DIN	5140 ASTM A29

Initial billet



Rolled part



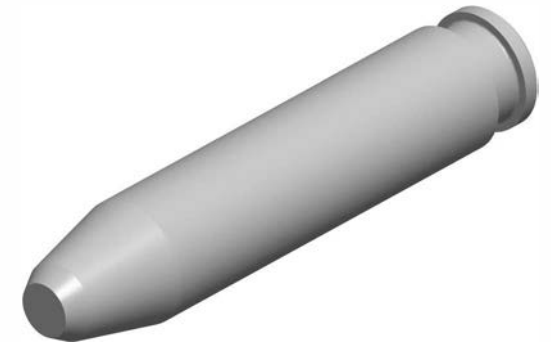
CWR machine type : _____

Die length, mm : _____

Output production, pcs/h : _____

Heater installed capacity, kW : _____

Temperature of rolling, °C : _____

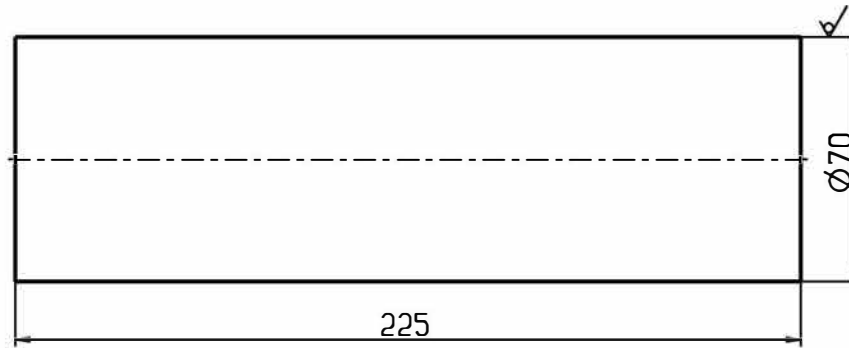


Mining cutter

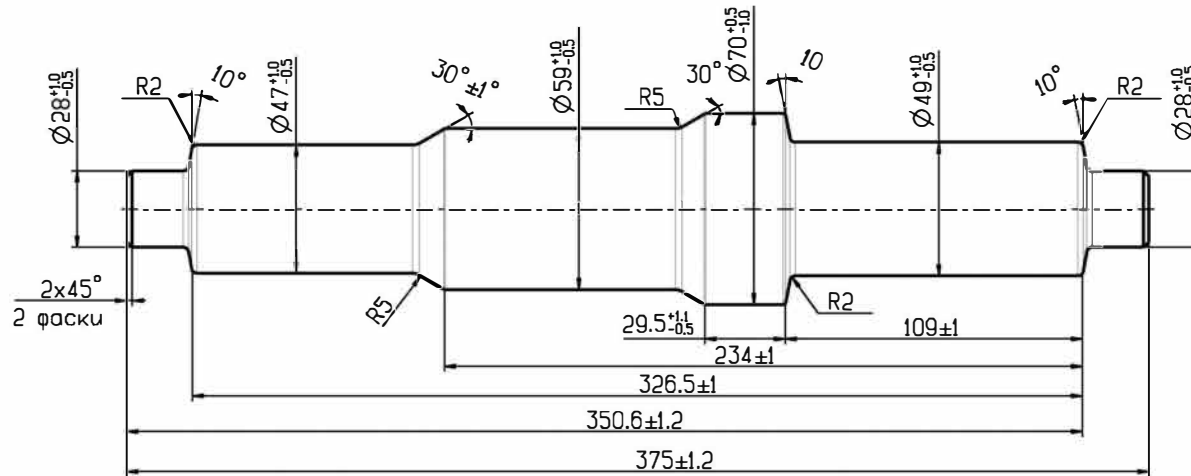
Material steel:	Russia	Germany	USA
	40X GOST 4543	1.7035 DIN	5140 ASTM A29

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Initial billet



Rolled part



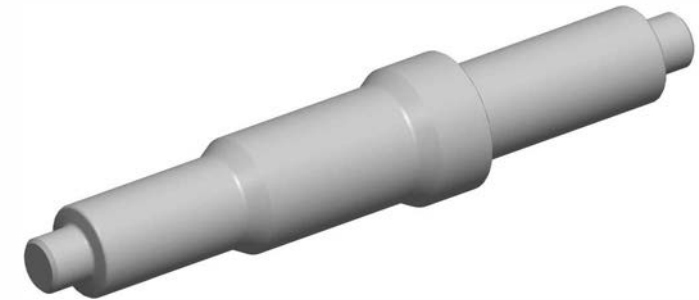
CWR machine type :

Die length, mm :

Output production, pcs/h :

Heater installed capacity, kW :

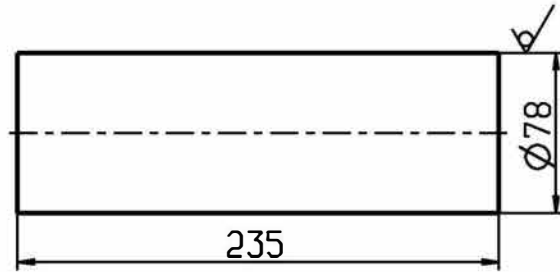
Temperature of rolling, °C :



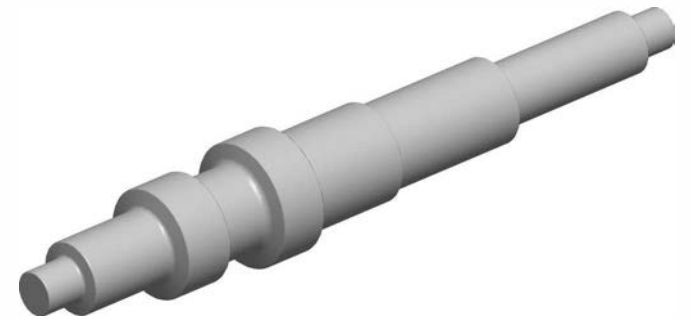
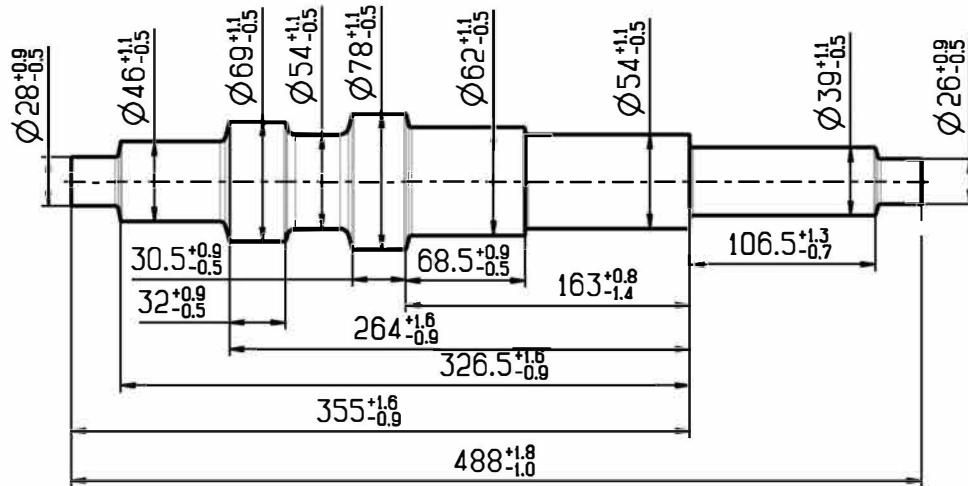
Shaft

Material steel:	Russia	Germany	USA
	20ХГНМ GOST 4543	1.6523 DIN	8620RH SAE J1868

Initial billet



Rolled part



Shaft

CWR machine type :

Die length, mm :

Output production, pcs/h :

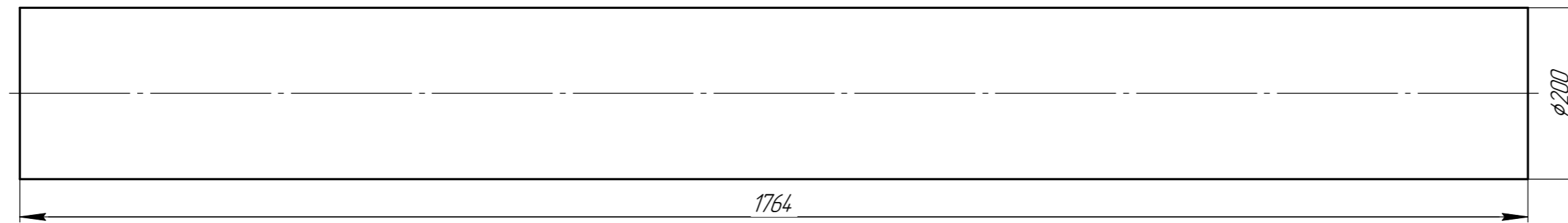
Heater installed capacity, kW :

Temperature of rolling, °C :

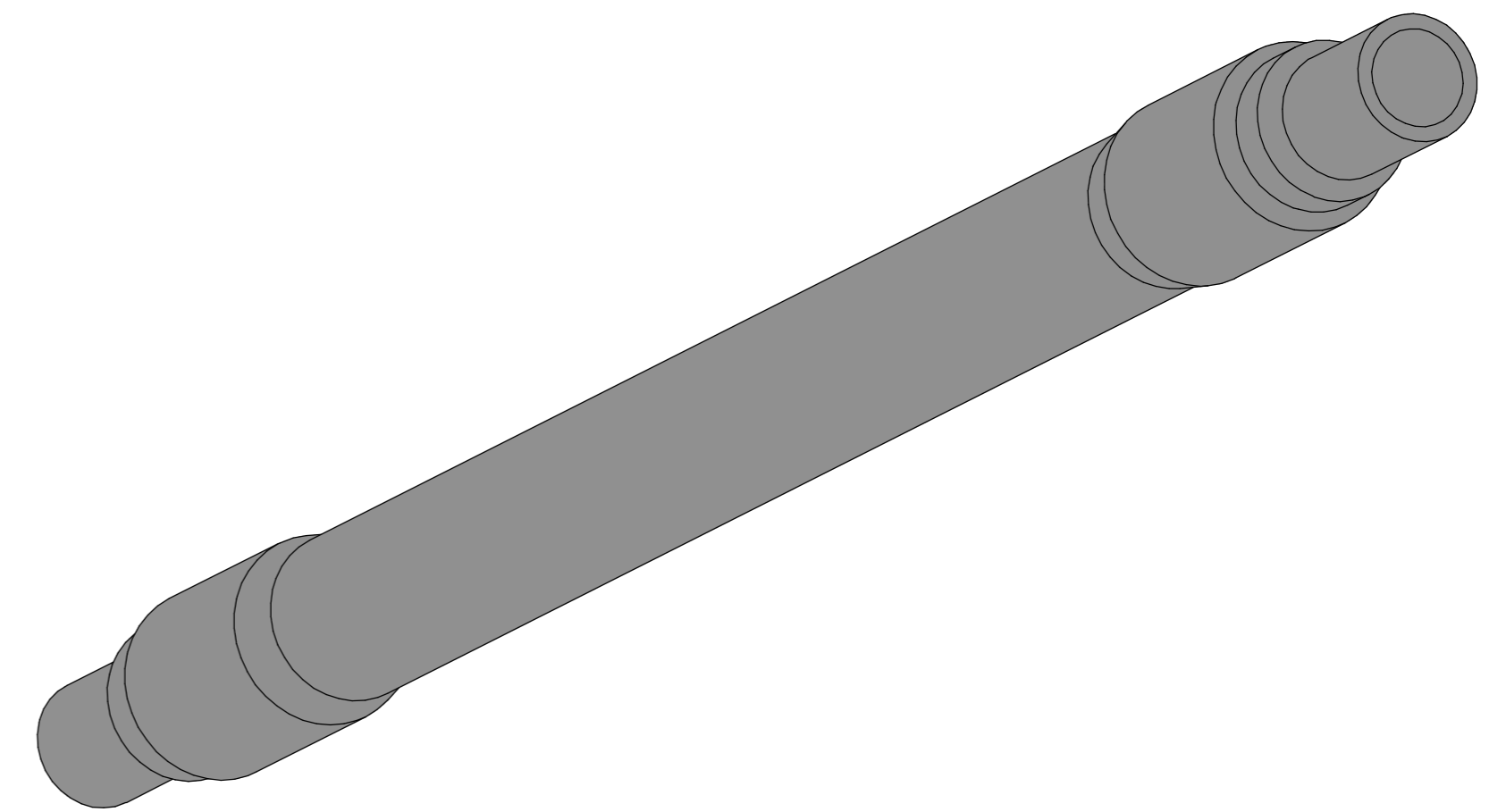
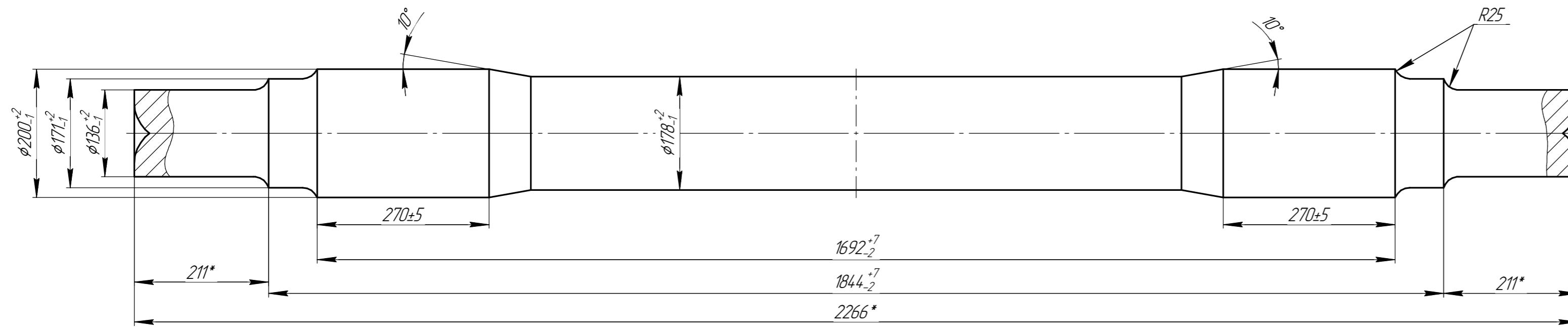
Material steel:	Russia	Germany	USA
	20XГНМ GOST 4543	1.6523 DIN	8620RH SAE J1868

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Initial billet



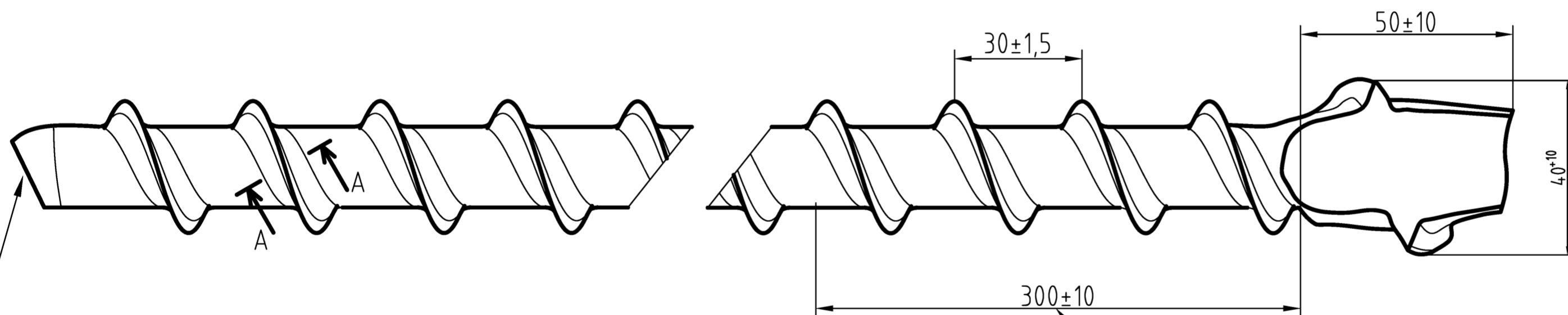
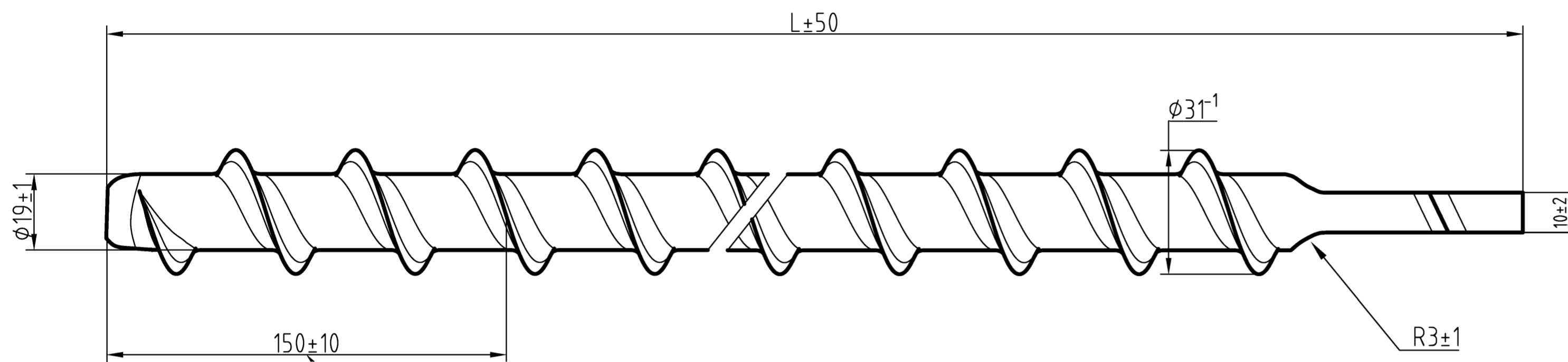
Railway axis preform
Weight: 438 kg



Material steel:

Russia
OC GOST 4728

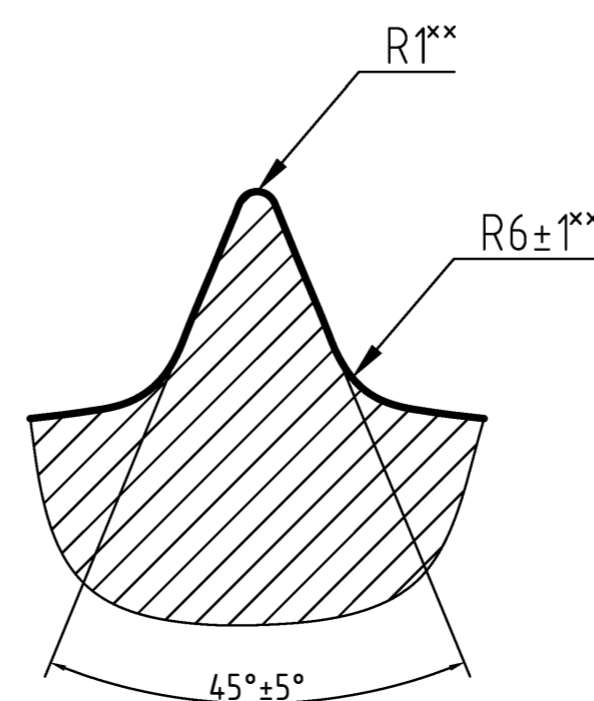
C - 0.42-0.5% Si - 0.15-0.35% Mn - 0.6-0.9%
Ni \leq 0.3% S \leq 0.04% P \leq 0.04% Cr \leq 0.3% Cu \leq 0.25%



TYPE	Length, L, мм	Weight, кг	Workpiece length, мм
SCREW-0,9	900±50	2,7	590
SCREW-1,2	1200±50	3,6	770
SCREW-1,5	1500±50	4,4	960
SCREW-1,8	1800±50	5,2	1180

Crater allowed


A-A (5:1)

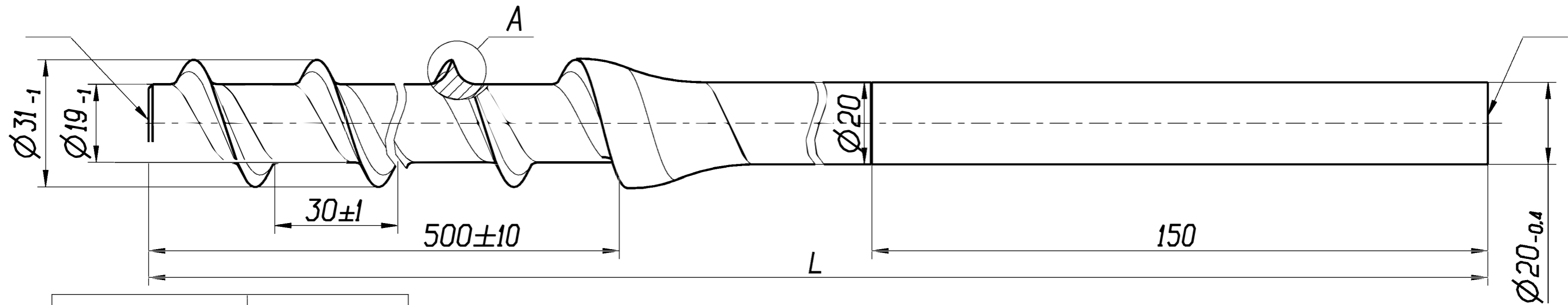


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Mining screw anchor fortress	Лист	Масса	Масштаб
	1	-	1:1
Circle 26mm Steel3	Листов 1		

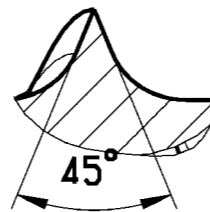
HRL3020-01.00.001

12.5




Type	Length L, mm
02.001	1000
02.002	1100
02.003	1200
02.004	1300
02.005	1400
02.006	1500
02.007	1600
02.008	1700
02.009	1800
02.010	1900
02.011	2000

A (2:1)



AMT
 ENGINEERING

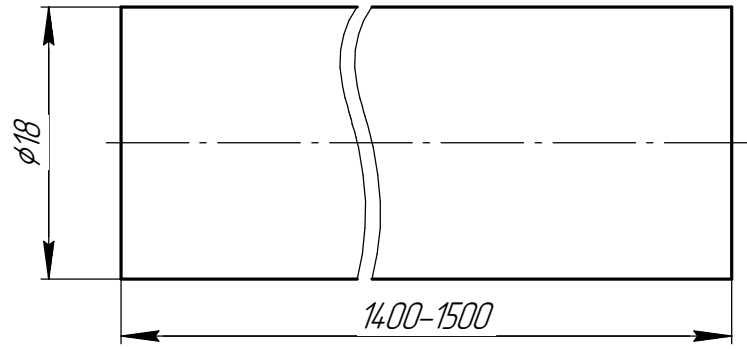
SCREW 2

Mining screw anchor
 fortress

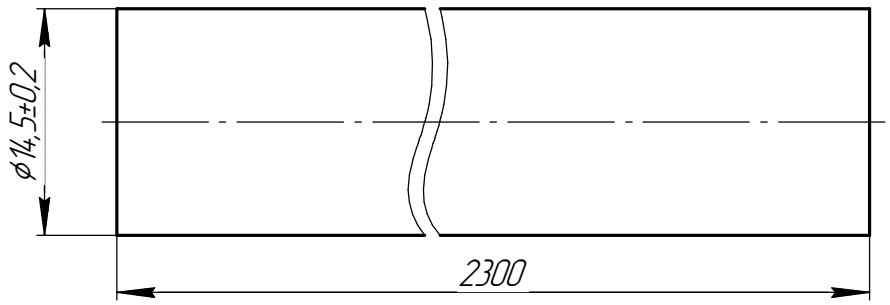
Circle 26mm Steel3
 0



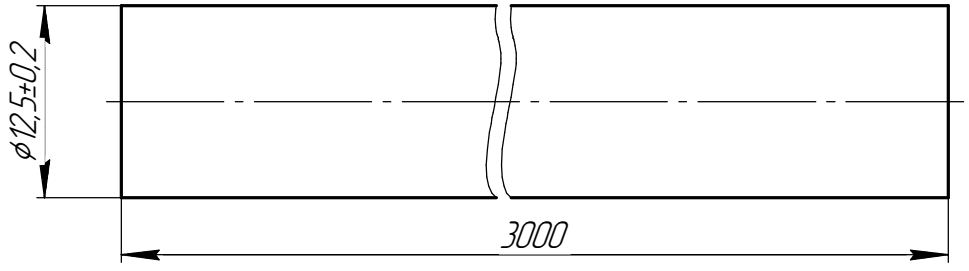
Initial billet №2



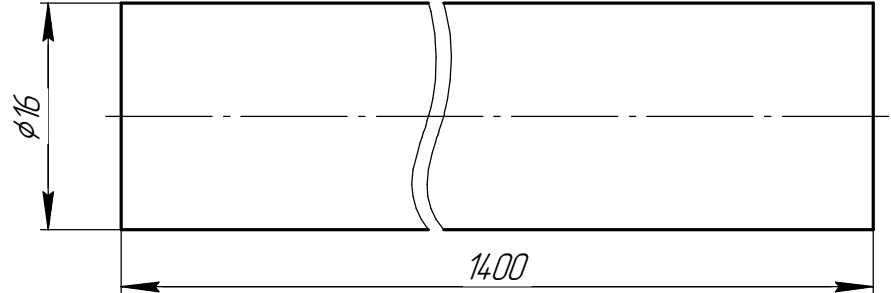
Calibrated rod №2.1



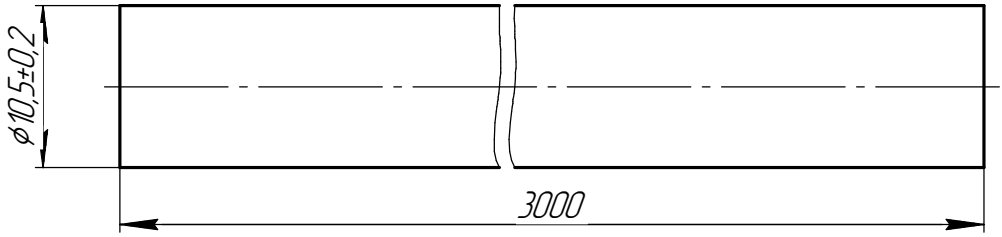
Calibrated rod №2.2



Initial billet №1



Calibrated rod №1.1



* Dimensions are for reference and are specified during the commissioning process.

№/№	Initial billet		Calibrated rod	
	diameter, mm	length*, mm	diameter, mm	length*, mm
1	$16 \pm 0,2$	1400	$10,5 \pm 0,2$	3000 ± 30
2	$18 \pm 0,2$	1500	$12,5 \pm 0,2$	3000 ± 30
3	$18 \pm 0,2$	1400-1500	$14,5 \pm 0,2$	2300 ± 30

					HRL1815-01.00.001				
					<i>Calibrated rod</i>				
					Brass				