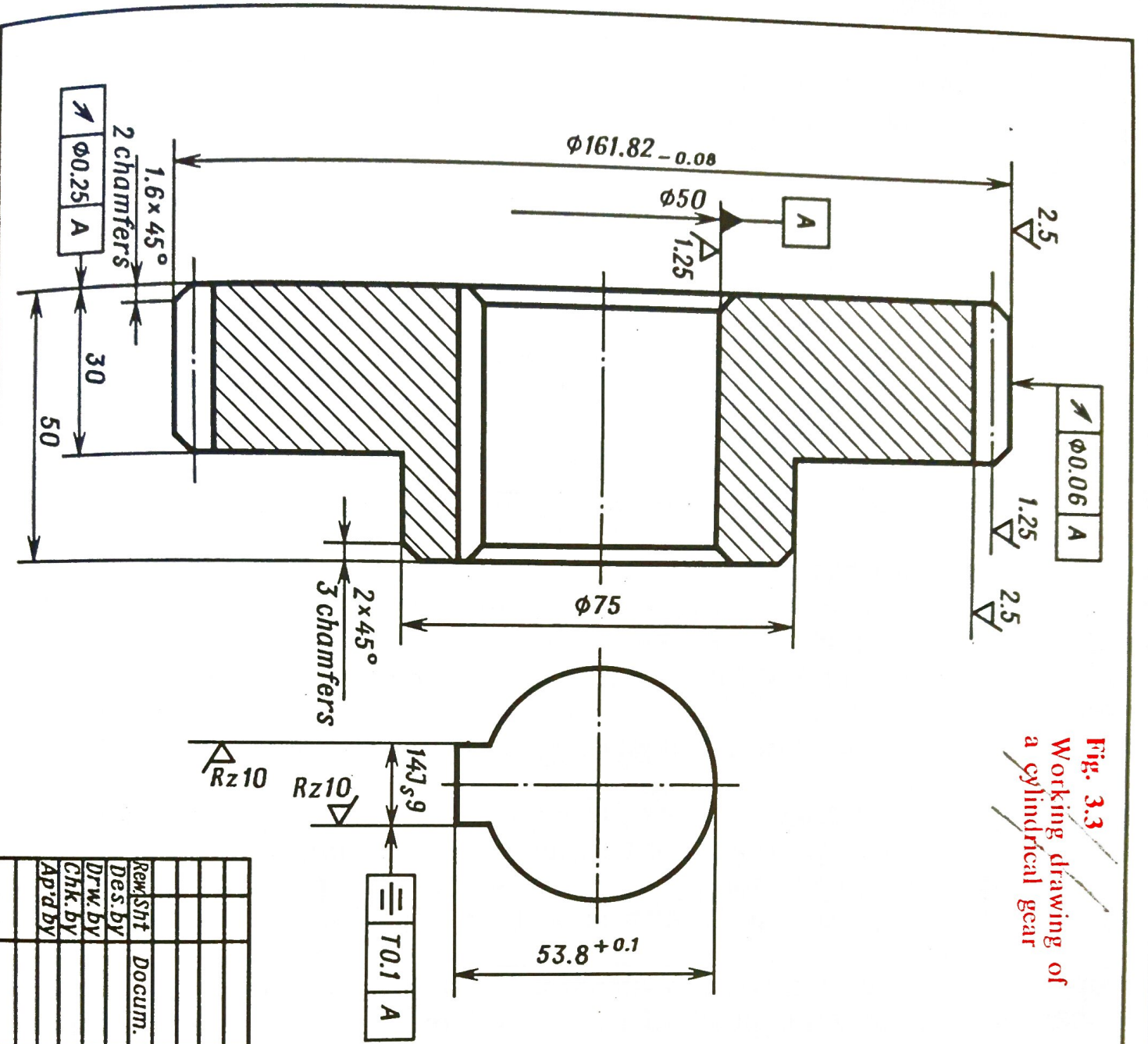


Fig. 3.3
Working drawing of
a cylindrical gear



Rz20
√ (v)

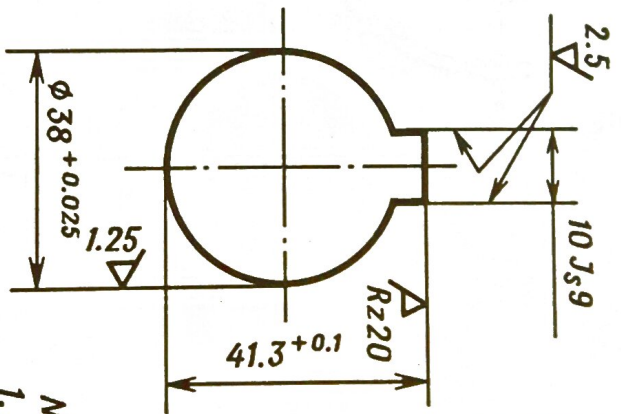
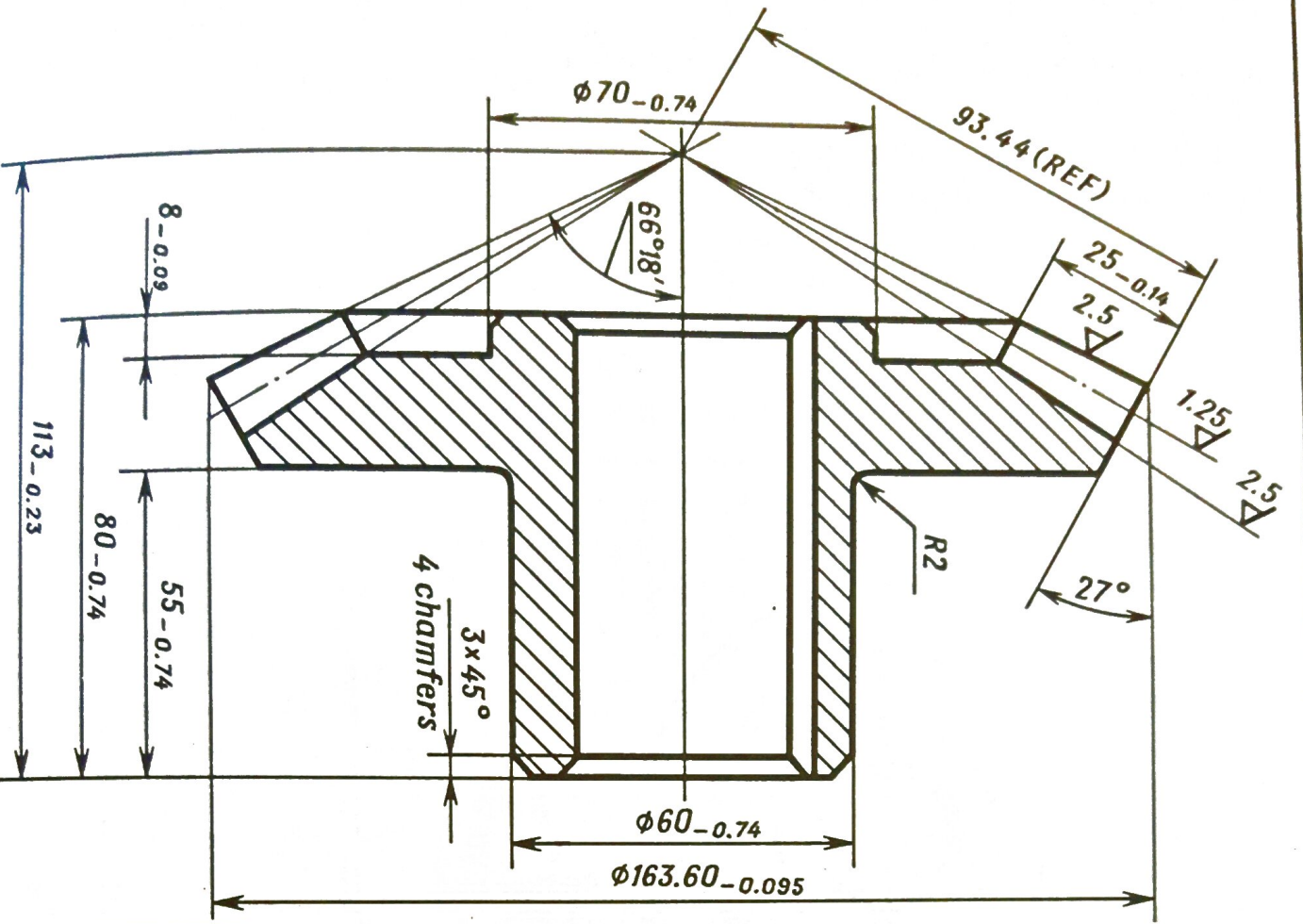
Module	m	3
Number of teeth	Z	50
Helix angle	β	16°
Direction of tooth trace	-	RH
Tooth profile	-	GOST 13755-81
Degree of accuracy	-	8-X
Chordal thickness	s_{xn}	$4.71_{-0.26}^{+0.38}$
Chordal addendum	h_x	3.1
Circular pitch	P_t	396.9

Notes:

1. HB240 to 280
2. Unless otherwise noted, tolerances H12, h12, or $\pm IT12/2$

Rev. Sht	Docum.	by	Date	Helical Gear	Steel 45	Mass	Scale
Des. by							
DRW. by							
CHK. by							
AP'd by							
				Sheet 1 of 1			

Rz40
√(v)

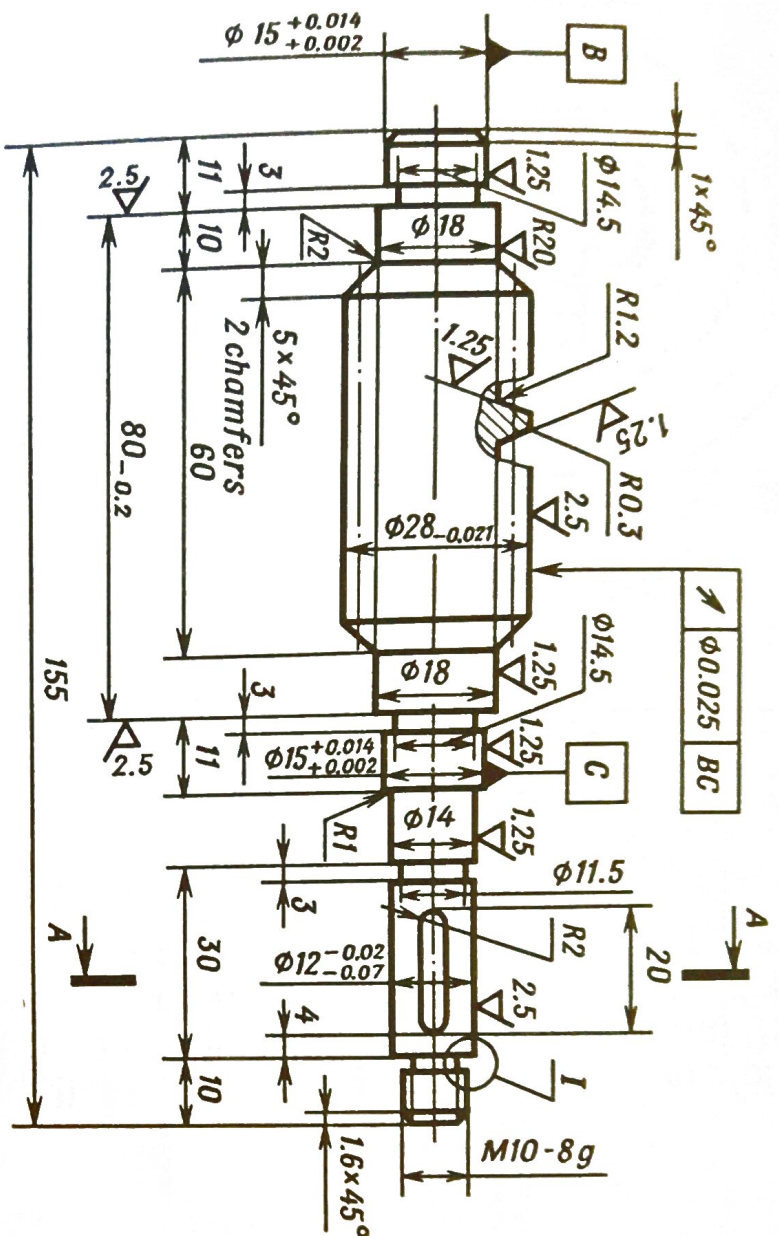


Module	m_e	4
Number of teeth	Z	40
Type of teeth		Straight
Tooth profile		GOST13754-81
Pitch angle	δ	63°26'
Root angle	δ_f	60°05'
Degree of accuracy		8-X
Chordal thickness	S	6,28
Chordal addendum	h_a	4.06
Tooth angle	θ_a	3°08'

- Notes:
1. HRC 45 to 50
 2. Unless otherwise specified, tolerances are H12, h12, or ± IT12/12

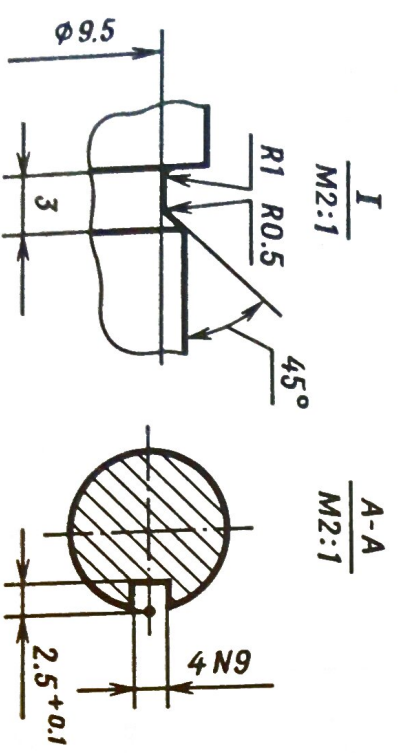
Rev. Sht	Docum.	by	Date	<p style="text-align: center;">Bevel Gear</p> <p style="text-align: center;">Steel 45</p>	<table border="1"> <tr> <td>Code</td> <td>Mass</td> <td>Scale</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">Sheet 1 of 1</td> </tr> </table>	Code	Mass	Scale				Sheet 1 of 1		
Code	Mass	Scale												
Sheet 1 of 1														
Des. by														
Drw. by														
Chk. by														
Ap'd by														

Rz40
√(v)



Axial pitch	m	2
Number of threads	Z_1	2
Helix angle	γ	$9^\circ 27' 44''$
Direction of helix		RH
Type of worm		ZA
Lead	P_{z1}	12.566
Helix angle	α_x	20°
Whole depth of thread	h_1	4.4
Normal chordal thickness	S_{a1}	$3.09_{-0.16}^{-0.21}$
Normal chordal addendum	ha_1	2.00
Axial pitch error	Δu_1^t	± 0.011
Accumulated pitch error, max	Δu_1^t	± 0.02
Tolerance on profile	δ_f	0.017
Thread runout	E_u	0.018
Degree of accuracy		7-X

- Notes:
1. HRC45 to 50
 2. Unspecified dimensional tolerances are H14, h14, or $\pm IT14/2$

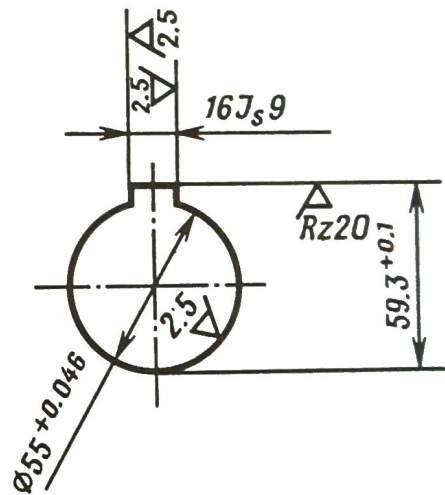
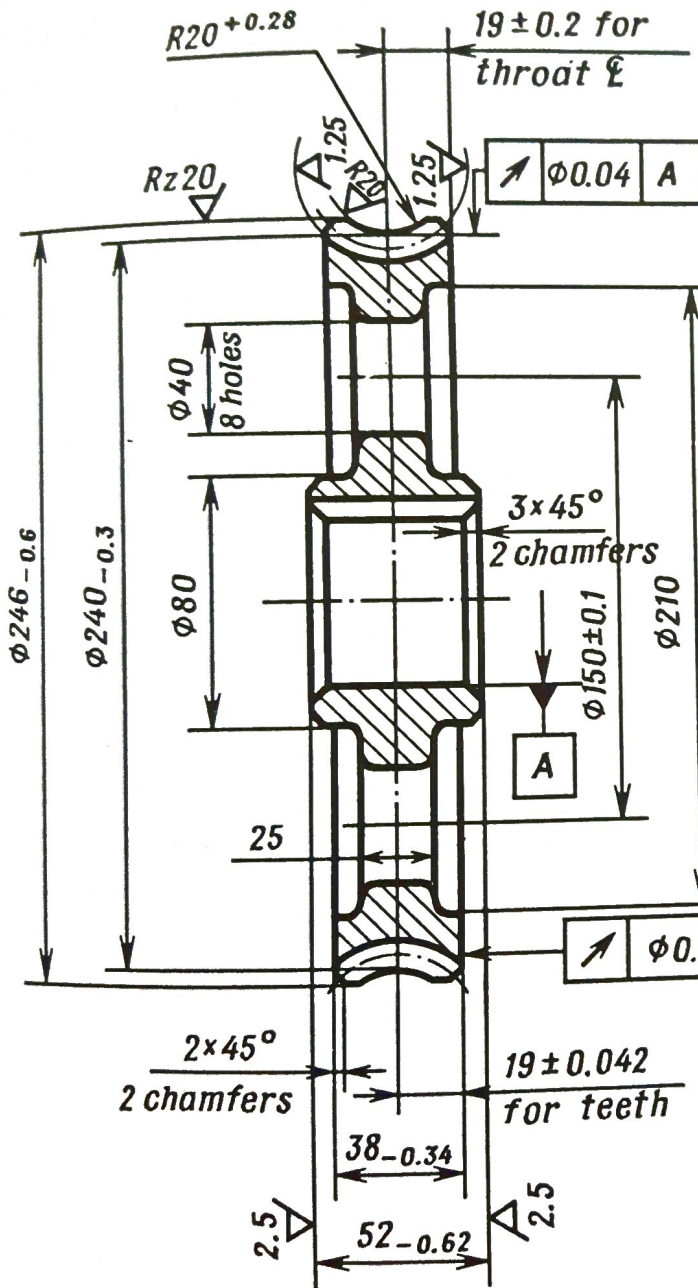


Rev. Sht	Docum.	by	Date
Des. by			
Drw. by			
Chk. by			
Appd. by			
Worm			
Chromium steel 40X			
Code	Mass	Scale	
	0.480	1:1	
Sheet 1 of 1			

Fig. 3.8
Working drawing of a cylindrical worm

Rz40 \checkmark (\checkmark)

Axial module		m_s	4
Number of teeth		Z_2	56
Mating worm	Type of worm	-	ZA
	Number of threads	Z_1	2
	Helix direction	-	RH
Center distance		a_w	144
Degree of accuracy		-	7-X
Cutter data	Tooth thickness (axial section)	s_u	6.56
	Clearance	c_k	1
	Tooth bevel	r_{en}	1



Notes:
 1. Machine all fillets to R4
 2. Tolerances on dimensions H14, h14, or $\pm IT14/2$, unless noted otherwise

Rev.	Sht	Docum.	by	Date

Worm Gear

Grey iron ($\sigma_{ul} = 240 \text{ MPa}$)

Code	Mass	Scale

Sheet 1 of 1