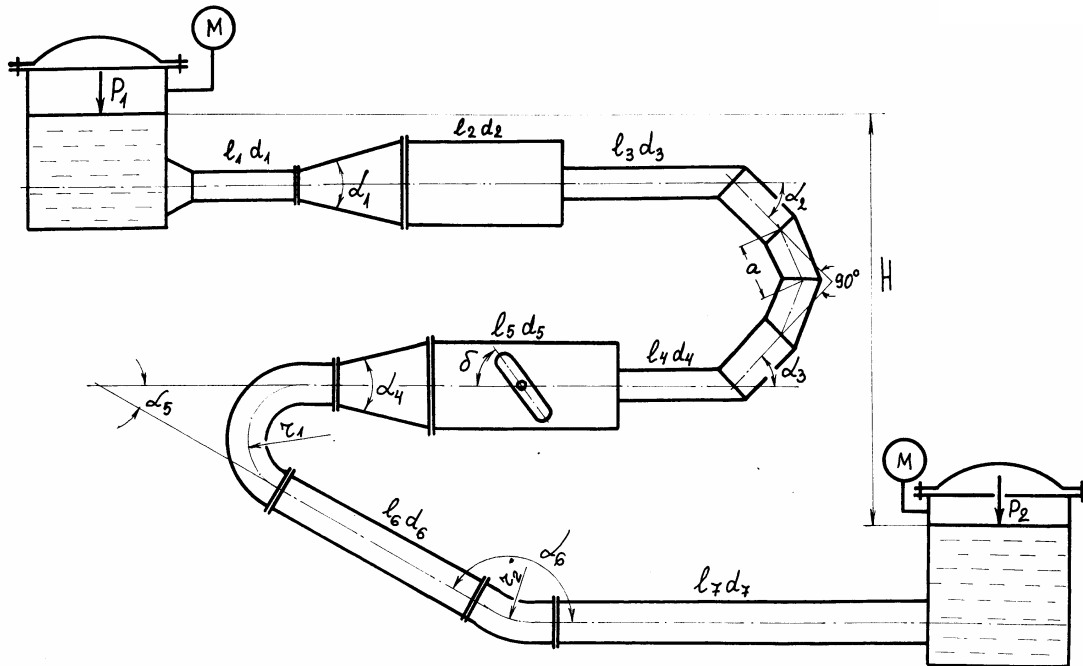
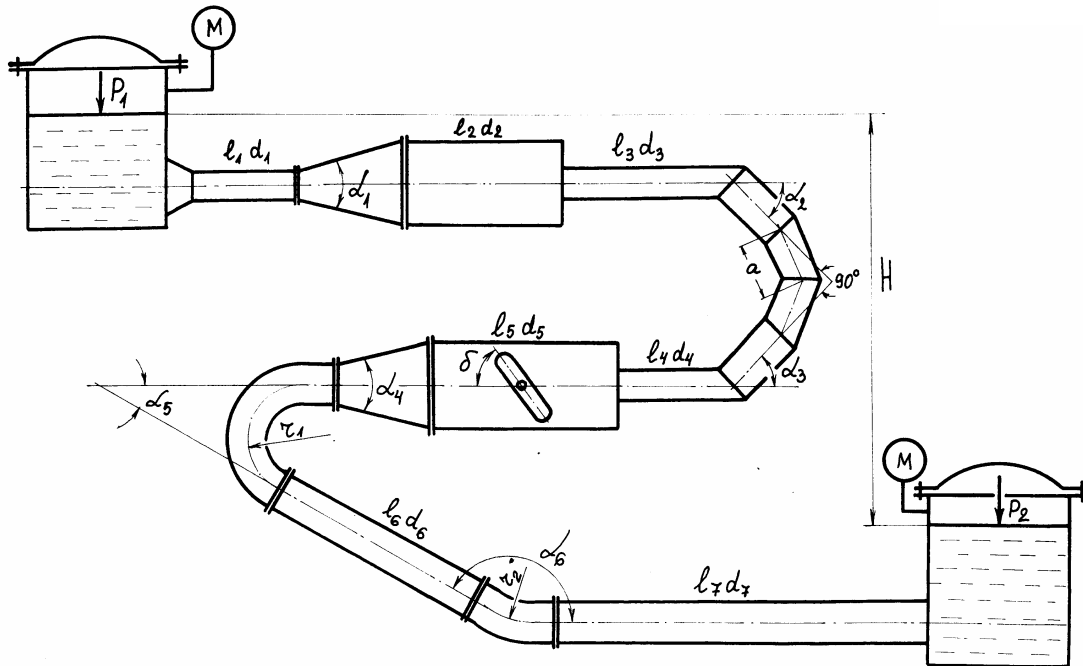


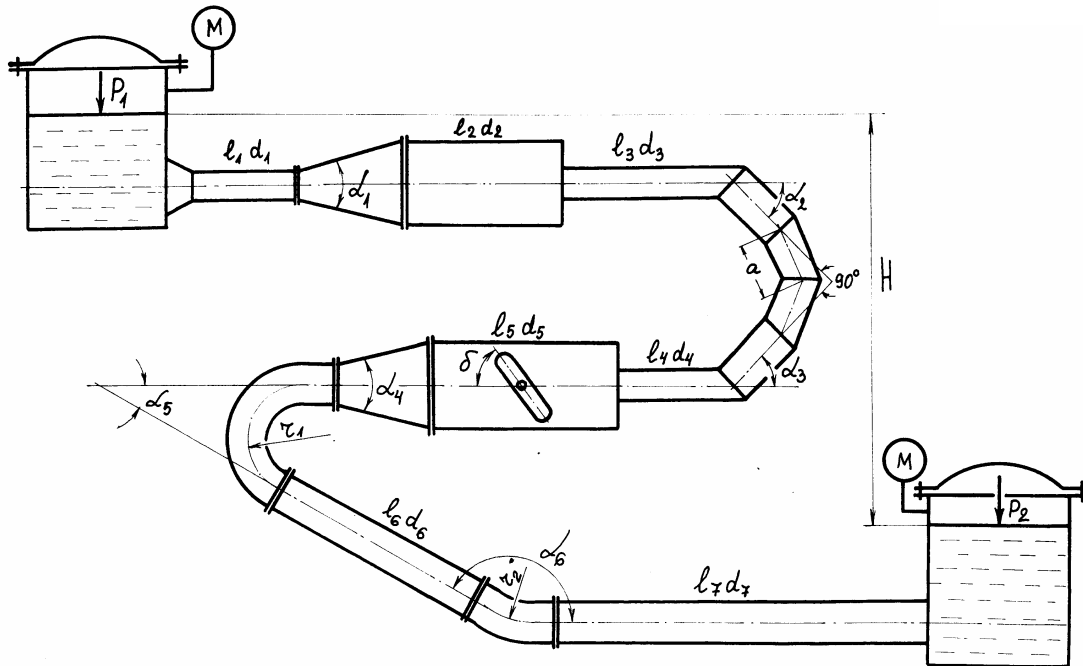
МЕХАНИКА НА ФЛУИДИТЕ	Упражнение N 13
	Определяне хидравличните загуби на прости тръбни системи
	Вариант: 51
	Вода с температура - $t = 56^\circ \text{C}$
	$Q = 8.4 \text{ l/s}$ $p_1 = 1.2 \text{ atm}$ $p_2 = 1.1 \text{ atm}$
	$l_1 = 20 \text{ m}$ $d_1 = 20 \text{ mm}$ $l_2 = 60 \text{ m}$ $d_2 = 120 \text{ mm}$ $l_3 = 80 \text{ m}$ $d_3 = 70 \text{ mm}$ $l_4 = 120 \text{ m}$ $d_4 = 70 \text{ mm}$ $l_5 = 11 \text{ m}$ $d_5 = 170 \text{ mm}$ $l_6 = 12 \text{ m}$ $d_6 = 80 \text{ mm}$ $l_7 = 122 \text{ m}$ $d_7 = 80 \text{ mm}$
	$\alpha_1 = 25^\circ$ $\alpha_4 = 30^\circ$ $\alpha_2 = 25^\circ$ $\alpha_5 = 30^\circ$ $\alpha_3 = 30^\circ$ $\alpha_6 = 160^\circ$
	$\delta = 20^\circ$ $a = 2 d_3$
	колената с - $\frac{d_i}{r_i} = 0,6$ тръби стоманени ръждясали



МЕХАНИКА НА ФЛУИДИТЕ	Упражнение N 13																					
Определяне хидравличните загуби на прости тръбни системи																						
<p>Вариант: 52</p> <p>Вода с температура - $t = 36^\circ \text{C}$</p> <p>$Q = 17.4 \text{ l/s}$ $p_1 = 6.2 \text{ atm}$ $p_2 = 5.1 \text{ atm}$</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">$l_1 = 220 \text{ m}$</td> <td style="width: 50%; border: none;">$d_1 = 20 \text{ mm}$</td> </tr> <tr> <td style="border: none;">$l_2 = 160 \text{ m}$</td> <td style="border: none;">$d_2 = 120 \text{ mm}$</td> </tr> <tr> <td style="border: none;">$l_3 = 180 \text{ m}$</td> <td style="border: none;">$d_3 = 80 \text{ mm}$</td> </tr> <tr> <td style="border: none;">$l_4 = 120 \text{ m}$</td> <td style="border: none;">$d_4 = 80 \text{ mm}$</td> </tr> <tr> <td style="border: none;">$l_5 = 110 \text{ m}$</td> <td style="border: none;">$d_5 = 150 \text{ mm}$</td> </tr> <tr> <td style="border: none;">$l_6 = 112 \text{ m}$</td> <td style="border: none;">$d_6 = 80 \text{ mm}$</td> </tr> <tr> <td style="border: none;">$l_7 = 126 \text{ m}$</td> <td style="border: none;">$d_7 = 80 \text{ mm}$</td> </tr> </table> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">$\alpha_1 = 25^\circ$</td> <td style="width: 50%; border: none;">$\alpha_4 = 20^\circ$</td> </tr> <tr> <td style="border: none;">$\alpha_2 = 45^\circ$</td> <td style="border: none;">$\alpha_5 = 30^\circ$</td> </tr> <tr> <td style="border: none;">$\alpha_3 = 45^\circ$</td> <td style="border: none;">$\alpha_6 = 120^\circ$</td> </tr> </table> <p>$\delta = 30^\circ, \quad a = 4 d_3$</p> <p>колената с - $\frac{d_i}{r_i} = 2,0$</p> <p style="text-align: right;">тръби чугунени нови</p>			$l_1 = 220 \text{ m}$	$d_1 = 20 \text{ mm}$	$l_2 = 160 \text{ m}$	$d_2 = 120 \text{ mm}$	$l_3 = 180 \text{ m}$	$d_3 = 80 \text{ mm}$	$l_4 = 120 \text{ m}$	$d_4 = 80 \text{ mm}$	$l_5 = 110 \text{ m}$	$d_5 = 150 \text{ mm}$	$l_6 = 112 \text{ m}$	$d_6 = 80 \text{ mm}$	$l_7 = 126 \text{ m}$	$d_7 = 80 \text{ mm}$	$\alpha_1 = 25^\circ$	$\alpha_4 = 20^\circ$	$\alpha_2 = 45^\circ$	$\alpha_5 = 30^\circ$	$\alpha_3 = 45^\circ$	$\alpha_6 = 120^\circ$
$l_1 = 220 \text{ m}$	$d_1 = 20 \text{ mm}$																					
$l_2 = 160 \text{ m}$	$d_2 = 120 \text{ mm}$																					
$l_3 = 180 \text{ m}$	$d_3 = 80 \text{ mm}$																					
$l_4 = 120 \text{ m}$	$d_4 = 80 \text{ mm}$																					
$l_5 = 110 \text{ m}$	$d_5 = 150 \text{ mm}$																					
$l_6 = 112 \text{ m}$	$d_6 = 80 \text{ mm}$																					
$l_7 = 126 \text{ m}$	$d_7 = 80 \text{ mm}$																					
$\alpha_1 = 25^\circ$	$\alpha_4 = 20^\circ$																					
$\alpha_2 = 45^\circ$	$\alpha_5 = 30^\circ$																					
$\alpha_3 = 45^\circ$	$\alpha_6 = 120^\circ$																					



МЕХАНИКА НА ФЛУИДИТЕ	Упражнение N 13	
	Определяне хидравличните загуби на прости тръбни системи	
	Вариант: 53	
	Вода с температура - $t = 53^\circ \text{C}$	
	$Q = 4.4 \text{ l/s}$	$p_1 = 1.2 \text{ atm}$ $p_2 = 1.1 \text{ atm}$
	$l_1 = 20 \text{ m}$	$d_1 = 30 \text{ mm}$
	$l_2 = 60 \text{ m}$	$d_2 = 120 \text{ mm}$
	$l_3 = 80 \text{ m}$	$d_3 = 70 \text{ mm}$
	$l_4 = 120 \text{ m}$	$d_4 = 70 \text{ mm}$
	$l_5 = 11 \text{ m}$	$d_5 = 150 \text{ mm}$
	$l_6 = 12 \text{ m}$	$d_6 = 50 \text{ mm}$
	$l_7 = 128 \text{ m}$	$d_7 = 50 \text{ mm}$
	$\alpha_1 = 25^\circ$	$\alpha_4 = 30^\circ$
	$\alpha_2 = 25^\circ$	$\alpha_5 = 30^\circ$
	$\alpha_3 = 30^\circ$	$\alpha_6 = 160^\circ$
	$\delta = 50^\circ$	$a = 1,5 d_3$
	колената с - $\frac{d_i}{r_i} = 1,8$	тръби стоманени ръждясали



МЕХАНИКА НА ФЛУИДИТЕ	Упражнение N 13	
Определяне хидравличните загуби на прости тръбни системи		
Вариант: 54		
Вода с температура - $t = 36^\circ \text{C}$		
$Q = 17,4 \text{ l/s}$	$p_1 = 6.2 \text{ atm}$	$p_2 = 5.1 \text{ atm}$
$l_1 = 220 \text{ m}$	$d_1 = 20 \text{ mm}$	
$l_2 = 160 \text{ m}$	$d_2 = 120 \text{ mm}$	
$l_3 = 180 \text{ m}$	$d_3 = 70 \text{ mm}$	
$l_4 = 120 \text{ m}$	$d_4 = 70 \text{ mm}$	
$l_5 = 110 \text{ m}$	$d_5 = 150 \text{ mm}$	
$l_6 = 112 \text{ m}$	$d_6 = 80 \text{ mm}$	
$l_7 = 112 \text{ m}$	$d_7 = 80 \text{ mm}$	
	$\alpha_1 = 25^\circ$	$\alpha_4 = 20^\circ$
	$\alpha_2 = 45^\circ$	$\alpha_5 = 30^\circ$
	$\alpha_3 = 45^\circ$	$\alpha_6 = 120^\circ$
$\delta = 20^\circ$	$a = d_3$	
колената с $\frac{d_i}{r_i} = 0,6$		тръби чугунени нови