

Codi del procés selectiu: ATL041-22TRE

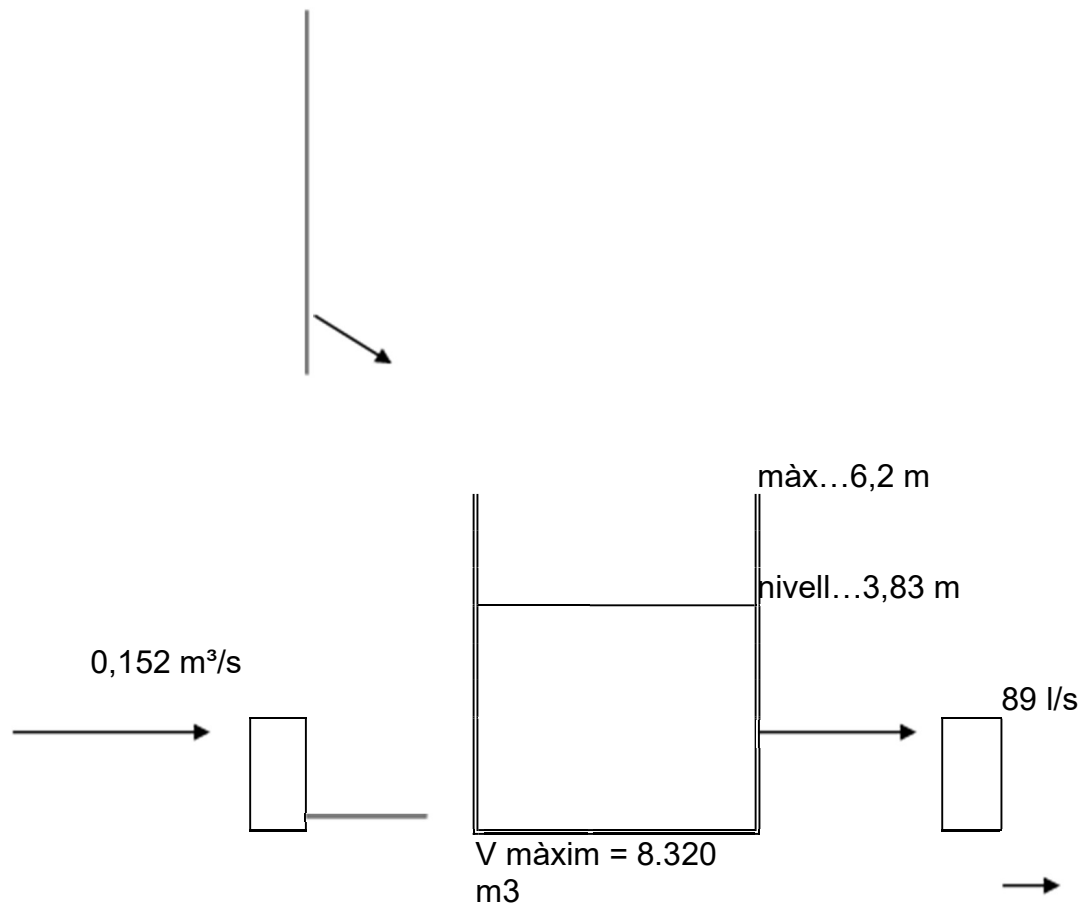
Lloc de treball: Operador/a de xarxa

Solucionari Test de coneixements prova teòrica del temari específic

Pregunta	A	B	C	D
1	X			
2				X
3		X		
4				X
5				X
6	X			
7	X			
8			X	
9			X	
10				X
11	X			
12			X	
13	X			
14				X
15			X	
16		X		
17	X			
18		X		
19				X
20		X		
Reserva				
21		X		
22			X	
23	X			

SOLUCIONARI PART PRÀCTICA

1.



$$Q = 0,152 \text{ m}^3/\text{s} = 0,152 \text{ m}^3/\text{s} * 3.600 \text{ s/h} = 547,2 \text{ m}^3/\text{h}$$

$$Q = 89 \text{ l/s} = (89 \text{ l/s} / 1.000 \text{ l/m}^3) * 3.600 \text{ s/h} = 320,4 \text{ m}^3/\text{h}$$

$$Q \text{ recuperació dip.} = 547,2 \text{ m}^3/\text{h} - 320,4 \text{ m}^3/\text{h} = 226,8 \text{ m}^3/\text{h}$$

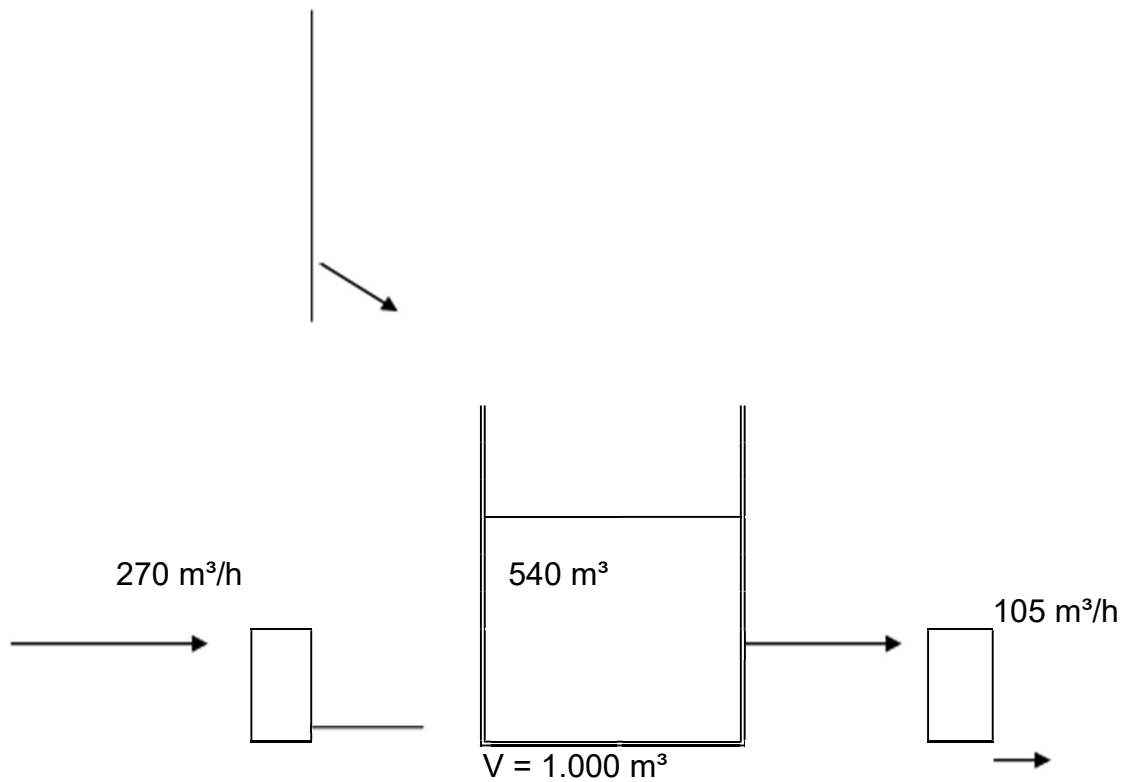
$$V \text{ dip. /m} = \frac{8.320 \text{ m}^3}{6,2 \text{ m}} = 1.341,94 \text{ m}^3/\text{m}$$

$$h \text{ fins sobreixir} = 6,2 \text{ m} - 3,83 \text{ m} = 2,37 \text{ m}$$

$$V \text{ de h} = 2,37 \text{ m} * 1.341,94 \text{ m}^3/\text{m} = 3.180,39 \text{ m}^3$$

$$t \text{ a màx.} = \frac{3.180,39 \text{ m}^3}{226,8 \text{ m}^3/\text{h}} = 14,02 \text{ h}$$

2.



Increment de conc. Cl = $0,7 \text{ mg/l} - 0,15 \text{ mg/l} = 0,55 \text{ mg/l}$

$V \text{ dip. tot.} = 540 \text{ m}^3 + 270 \text{ m}^3 - 105 \text{ m}^3 = 705 \text{ m}^3 * 1.000 \text{ l/m}^3 = 705.000 \text{ l}$

$\text{Cl actiu hipo.} = 150 \text{ g/l} * 1.000 \text{ mg/g} = 150.000 \text{ mg/l}$

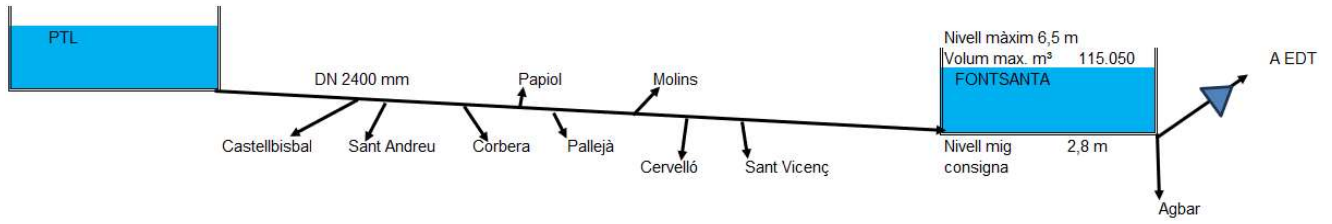
$$V \text{ hipo. (l)} = \frac{V \text{ dip. (l)} * \text{Conc. Cl (mg/l)}}{\text{conc. hip. (mg/l)}}$$

$$V \text{ hipo.} = \frac{705.000 \text{ l} * 0,55 \text{ mg/l}}{150.000 \text{ mg/l}} = \mathbf{2,58 \text{ l}}$$

$$\text{conc. Cl (mg/l)} = \frac{V \text{ hipo(l)} * \text{conc. hip. (mg/l)}}{V \text{ dip. (l)}}$$

$$\text{conc. Cl (mg/l)} = \frac{5,2 \text{ l} * 150.000 \text{ mg/l}}{705.000 \text{ l}} = \mathbf{1,11 \text{ mg/l}}$$

3.



$$\text{secc. m}^2 = (2,4)^2 \cdot 3,1416 / 4 = 4,52$$

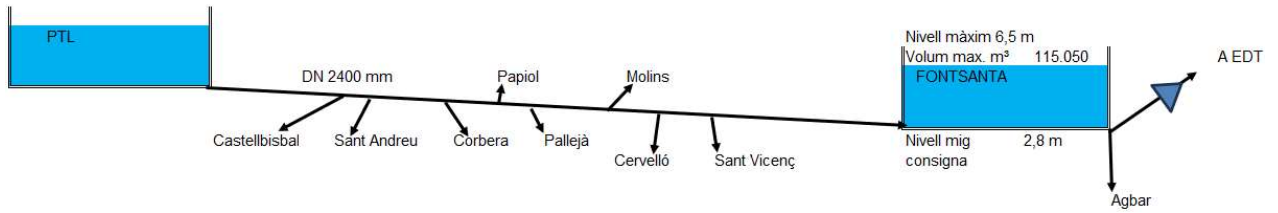
metres

A-B de Ptl a Castellbisbal	6.235		
de Castellbisbal a			
B-C Sant Andreu	1.693		
de Sant Andreu a			
C-D Corbera	1.644		
D-E de Corbera a Papiol	1.220		
E-F de Papiol a Pallejà	759		
F-G de Pallejà a Molins	1.622		
G-H de Molins a Cevelló	1.405		
de Cervelló a Sant			
H-I Vicenç	980		
de Sant Vicenç a			
I-J FontSanta	6.191		
Total			
Canonada=	+6.235+1.693+1.644+1.220+759+1.622+1.405+980+6.191 =	21.749	m

m³/dia

A-B Castellbisbal	-			V Canonada=	21.749 m³ 4,52 m³=	98.305,48	m³	
B-C Sant Andreu	-			V dip. FontSanta	=	(115.050 m³/6,5 m) * 2,8 m=	49.560,00	m³
C-D Corbera	-					TVolum	147.865,48	m³
D-E Papiol	-							
E-F Pallejà	-			T fins a sortida				
F-G Molins	-			de FontSanta=	147.865,48 m³/2.188,75 m³/h =	67,56	h	
G-H Cervelló	-							
H-I Sant Vicenç	-							
Entrada a								
I-J FontSanta	52.530	52.530/24	2.188,75					
a Agbar	5.590							
Impulsió a EDT	46.940							

4.



$$\text{secc. m}^2 = (2,4)^2 \cdot 3,1416 / 4 = 4,52$$

	metres	m^2	m^3		h
A-B de Ptl a Castellbisbal	6.235	$6.235 \text{ m}^2 \cdot 4,52$	28.182		
de Castellbisbal a Sant Andreu	1.693	$1.693 \text{ m}^2 \cdot 4,52$	7.652		
B-C de Sant Andreu a Corbera	1.644	$1.644 \text{ m}^2 \cdot 4,52$	7.431		
C-D de Corbera a Papiol	1.220	$1.220 \text{ m}^2 \cdot 4,52$	5.514		
E-F de Papiol a Pallejà	759	$759 \text{ m}^2 \cdot 4,52$	3.431		
F-G de Pallejà a Molins	1.622	$1.622 \text{ m}^2 \cdot 4,52$	7.331		
G-H de Molins a Cervelló	1.405	$1.405 \text{ m}^2 \cdot 4,52$	6.351		
I de Cervelló a Sant Vicenç	980	$980 \text{ m}^2 \cdot 4,52$	4.430		
J de Sant Vicenç a I-J Fontsanta	6.191	$6.191 \text{ m}^2 \cdot 4,52$	27.983		
	m^3/dia		m^3/h		
A-B Castellbisbal	3.825	$3.825/24$	159,38	$28.182/3.261,13$	8,64
B-C Sant Andreu	6.445	$6.445/24$	268,54	$7.652/(3.261,13-159,38)$	2,47
C-D Corbera	3.359	$3.359/24$	139,96	$7.431/(3.261,13-159,38-268,54)$	2,62
D-E Papiol	692	$692/24$	28,83	$5.514/(3.261,13-159,38-268,54-139,96)$	2,05
E-F Pallejà	1.712	$1.712/24$	71,33	$3.431/(3.261,13-159,38-268,54-139,96-28,83)$	1,29
F-G Molins	951	$951/24$	39,63	$7.331/(3.261,13-159,38-268,54-139,96-28,83-71,33)$	2,83
G-H Cervelló	3.062	$3.062/24$	127,58	$6.351/(3.261,13-159,38-268,54-139,96-28,83-71,33-39,63)$	2,49
H-I Sant Vicenç	5.691	$5.691/24$	237,13	$4.430/(3.261,13-159,38-268,54-139,96-28,83-71,33-39,63-127,58)$	1,83
I-J Fontsanta	52.530	$52.530/24$	2.188,75		
a Agbar	5.590				
Impulsió a EDT	46.940				

$$159,38 + 268,54 + 139,96 + 28,33 + 71,33 + 39,63 + 127,58 + 237,13 + 2.188,75 =$$

$$3.261,13 \text{ m}^3/\text{h}$$

24,21 h