

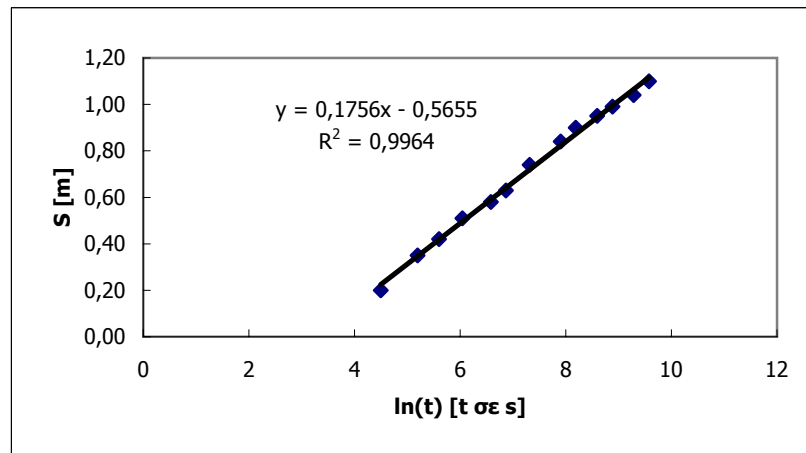
MH MONIMH POH

$$s(r,t) = \frac{Q}{4\pi T} \left(\ln \frac{2.25T}{r^2 S} + \ln t \right) = a + b \ln t$$

$$a = \frac{Q}{4\pi T} \ln \frac{2.25T}{r^2 S}$$

$$b = \frac{Q}{4\pi T}$$

t(min)	t(sec)	ln(t(sec))	s(m)
1,5	90	4,49981	0,20
3	180	5,19296	0,35
4,5	270	5,59842	0,42
7	420	6,04025	0,51
12	720	6,57925	0,58
16	960	6,86693	0,63
25	1500	7,31322	0,74
45	2700	7,90101	0,84
60	3600	8,18869	0,90
90	5400	8,59415	0,95
120	7200	8,88184	0,99
180	10800	9,2873	1,04
240	14400	9,57498	1,10



$$T = \frac{Q}{4 \pi b}$$

Q 100 m³/h
r 100 m
b 20 m

a= -0,5655
b= 0,1756

$$S = \frac{2.25T}{r^2} * \frac{1}{e^{a/b}}$$

T= 0,0125856 m²/s η 45 m²/h
S= 0,0000708 -
0,005628
K= 0,0006293 m/s

ΠΤΩΣΗ ΣΤΑΘΜΗΣ

r1	100 m
r2	200 m
S	7,084E-05
T	4,531E+01 m ² /h
Q	100 m ³ /h
t	6 h

$$u = \frac{S r^2}{4 t T}$$

$$s(r,t) = \frac{Q}{4\pi T} \ln \frac{2.25Tt}{r^2 S} \quad \begin{matrix} \text{s1} \\ \text{s2} \end{matrix}$$

u	umax=0.05	
0,000651	<0.05	Isxuei h Cooper-Jacob
0,002606	<0.05	Isxuei h Cooper-Jacob
1,187 m		
0,944 m		

$$s(r,t) = \frac{Q}{4\pi T} W(u)$$

$$W(u) = \begin{cases} -0.5772 - \ln(u) + \dots + \ln \frac{2.25Tt}{r^2 S}, & u < 0.05 \\ \frac{0.71e^{-1.03u}}{u^{0.754} + 0.17}, & 0.05 \leq u \leq 9 \\ \frac{e^{-u}(u-1)}{u^2}, & u > 9 \end{cases}$$

$$s(r,t) = \frac{Q}{4\pi T} \left(\ln \frac{2.25T}{r^2 S} + \ln t \right) = a + b \ln t$$

$$a = \frac{Q}{4\pi T} \ln \frac{2.25T}{r^2 S}$$

min	s	ln t	s
1,5	90	4,49981	0,22
3	180	5,192957	0,36
4,5	270	5,598422	0,43
7	420	6,040255	0,51
12	720	6,579251	0,58
16	960	6,866933	0,65
25	1500	7,31322	0,74
45	2700	7,901007	0,84
60	3600	8,188689	0,91
90	5400	8,594154	0,95
120	7200	8,881836	1,02
180	10800	9,287301	1,09
240	14400	9,574983	1,14

$$T = \frac{Q}{4 \pi b}$$

$$S = \frac{2.25 T}{r^2 e^{(a/b)}}$$

a

-0,5849

b

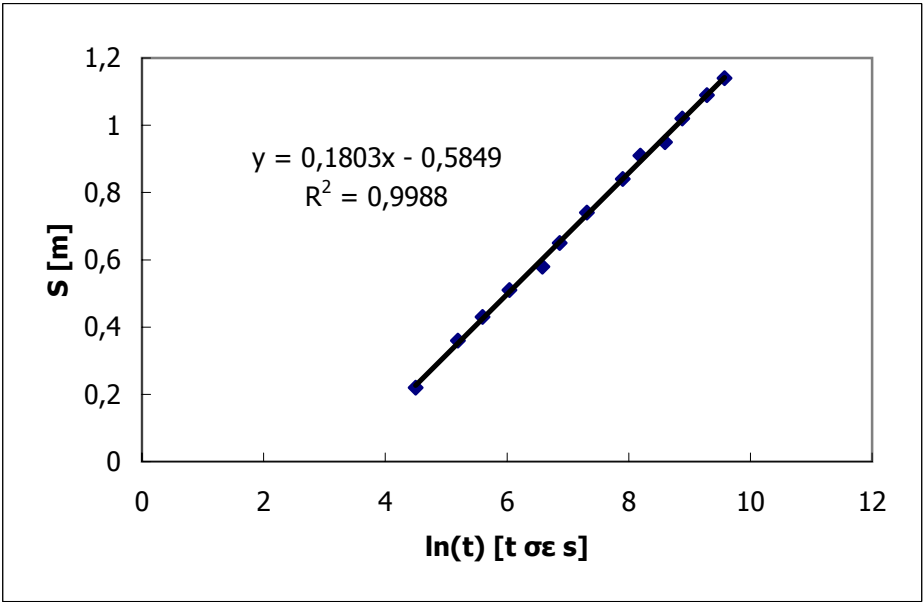
0,1803

T=

0,0123 m2/s

S=

0,00026 -



ΜΟΝΙΜΗ ΡΟΗ				ΜΟΝΙΜΗ ΡΟΗ			
Υπό πίεση				Ελεύθερος			
Δεδομένα	b	20	m	Δεδομένα	H0	50	m
	K	0,00063	m/s		K	0,00063	m/s
	Q	0,028	m ³ /s		Q	0,02778	m ³ /s
	sw	3,4	m		sw	3,4	m
	dw	0,5	m		dw	0,5	m
	R1	100	m		R1	100	m
	R2	200	m		R2	200	m
$H2-H1=(Q/2nbK) \ln(R2/R1)$				$H2^2-H1^2=(Q/nK) \ln(R2/R1)$			
	H2-Hw	2,349			H2 ² -Hw ²	93,9725	
	H0-s2-(H0-sw)	2,349			(H0-s2) ² -(H0-sw) ²	93,9725	
	sw-s2	2,349			(H0-s2) ²	2265,53	
	s1	1,294			s1	2,505	
	s2	1,051			s2	2,402	

ΜΕΤΑΠΤΩΣΗ ΣΕ ΜΟΝΙΜΗ ΡΟΗ

r1	100 m
r2	200 m
S	7,084E-05
T	4,531E+01 m2/h
Q	100 m3/h
s1	1,294 m
s2	1,051 m

$$u = \frac{S}{4} \frac{r^2}{t T}$$

$$s(r,t) = \frac{Q}{4\pi T} \ln \frac{2.25 T t}{r^2 S} \quad \begin{matrix} \text{t1} \\ \text{t2} \end{matrix}$$

$$t = \frac{r^2 S}{2.25 T} e^{\frac{4 \pi T}{Q} s(r,t)}$$

Έλεγχοι		
0,000 (Πρέπει 0)		
u	umax=0.05	
0,000356	<0.05	Isxuei h Cooper-Jacob
0,001424	<0.05	Isxuei h Cooper-Jacob

$$s(r,t) = \frac{Q}{4 \pi T} W(u)$$

$$W(u) = \begin{cases} -0.5772 - \ln(u) + \ln \frac{2.25 T t}{r^2 S}, & u < 0.05 \\ \frac{0.71 e^{-1.03 u}}{u^{0.754} + 0.17}, & 0.05 \leq u \leq 9 \\ \frac{e^{-u} (u - 1)}{u^2}, & u > 9 \end{cases}$$

$$s(r,t) = \frac{Q}{4\pi T} \left(\ln \frac{2.25T}{r^2 S} + \ln t \right) = a + b \ln t$$

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