



*

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(/ / / / / /)

GSI

s m

GSI_m GSI_s

- GSI :

GSI

. []

. []

GSI

s m

[]

φ c

GSI

φ c

. []

(m_b s a)

GSI

GSI

. []

GSI

$$m_b = m_i \cdot \exp\left(\frac{GSI - 100}{b_m}\right) \quad b_m = (16 - 28)$$

()

$$b_m = 3.14 \times \ln\left(\frac{d_f}{d_f + 340(1 - d_f)}\right) + 28$$

()

$$s = \exp\left(\frac{GSI - 100}{b_s}\right) \quad b_s = (6 - 9)$$

(c φ)

()

F

$$b_s = 0.67 \times \ln \frac{d_f}{d_f + 340(1 - d_f)} + 9 \quad ()$$

(G)

$$\begin{aligned} GSI > 30 & \quad a = 0.5 \\ GSI < 30 & \quad a = 0.65 - (GSI / 2000) \end{aligned} \quad ()$$

s, m_b

d_r m_i

GW

m_b s

/

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•

•

GSI

s m_b

)

(

()

•

(UCS)

•

m_i

s,

GSI

m_b

(GSI)

GSI

s m_b

[]

GSI

[]

F

[]

$$F = f\{GSI(m_b, S), GW, G\} \quad ()$$

s m_b)

GSI

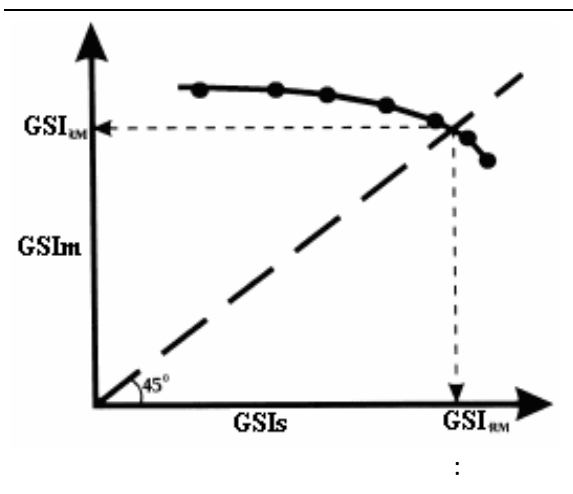
GW (

G

GSI

s, m_b

(m_b



GeoLink

GeoLink
GSI

Visual c++

GeoLink [] GeoSlope 6.02

GeoSlope

- d_f
- γ
- UCS
- m_i
- H
- GSI_s

GSI (F=) , s)

GSI :
(GSI , m_b , s)
() s
)
GSI ()
GSI_s s

m_b GSI GSI_s
(GSI_m)

[]
 GSI_s :
 GSI_s
 GSI_m

GSI_s GSI_m

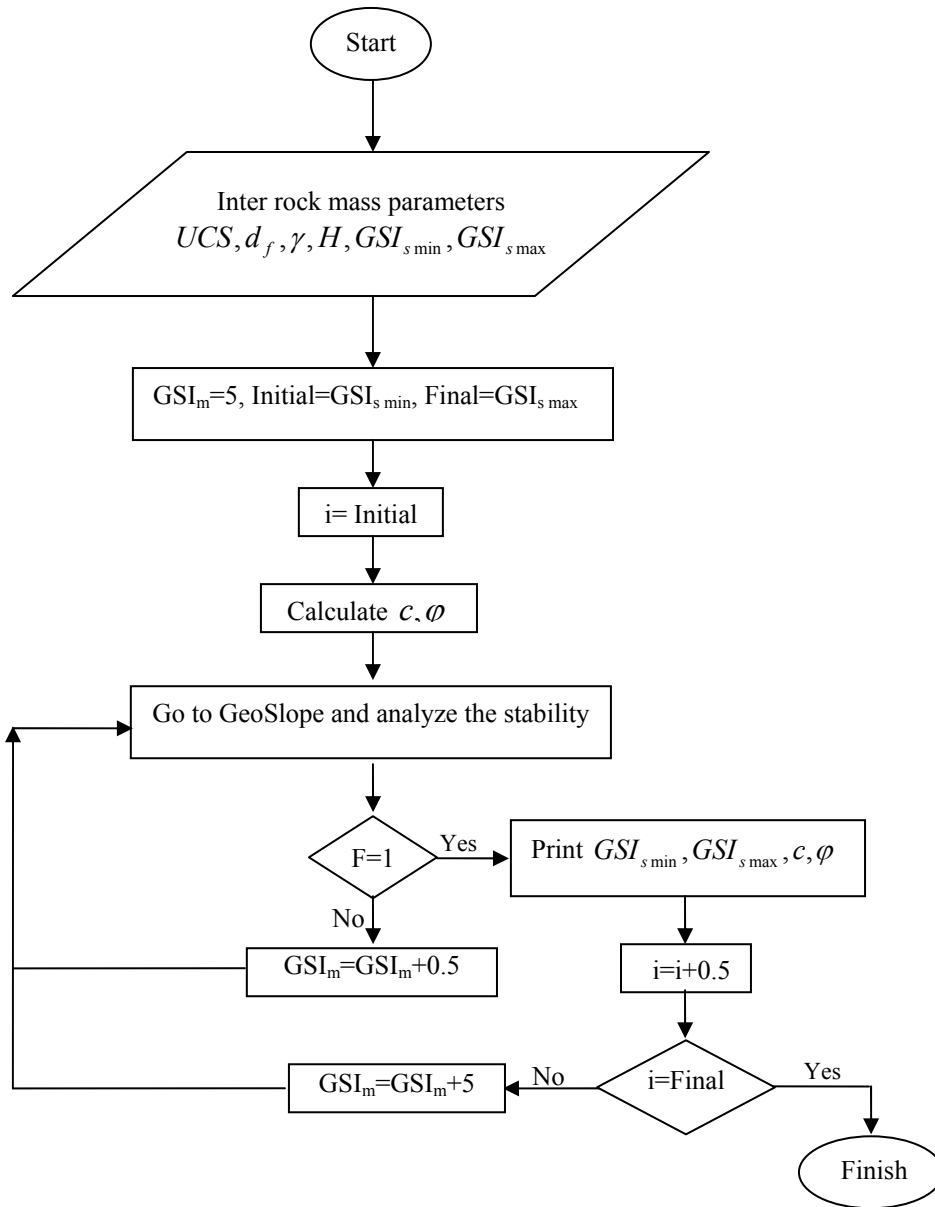
) ()
(GSI

s m_b GSI

() $GSI_s - GSI_m$

GSI_{RM} GSI
 GSI_{RM}

s m_b



. GeoLink

:

GeoSlope

	c, ϕ	GSI_m	GSI_s	GeoSlope
geo-temp				GeoLink
result		C		
			γ	[] d_f
			m_i	UCS

()

()

[]

)

()

() A-A'

GeoSlope

GeoSlope

GeoLink

m s

(GSI_s, GSI_m)

GSI

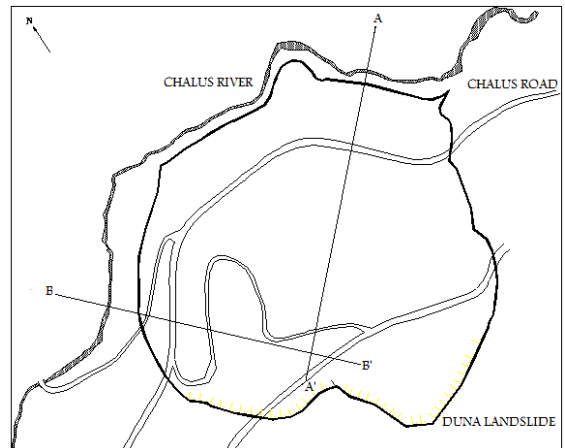
GeoLink

()

GeoLink

()

GSI_s GSI_m



B-B'

y=x

GeoLink

()

B-B'

$$GSI_m = GSI_s$$

GeoLink

Geoslope

GSI

()

()

kPa

()

y=x

$$GSI_m = GSI_s$$

GSI

kPa

$\leq F \leq /$

GSI

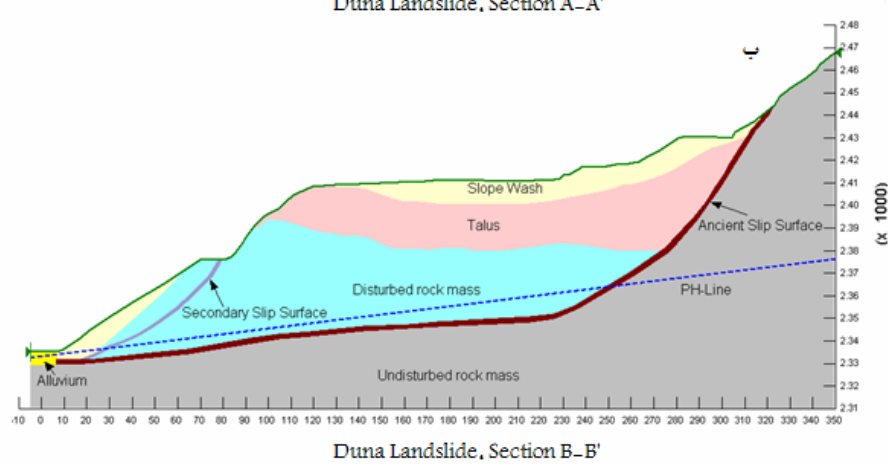
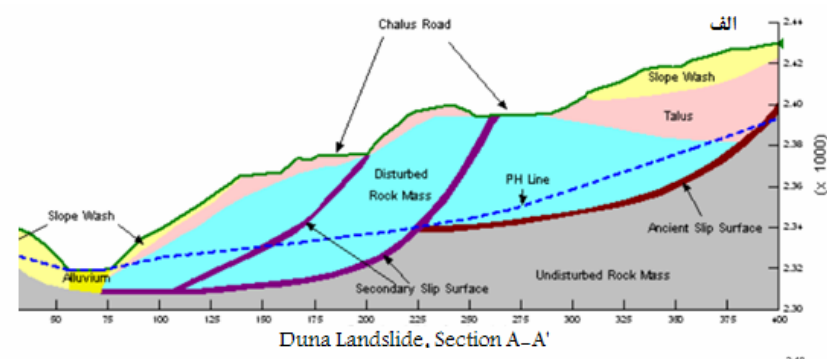
A-A'

B-B'

()

GSI

()



B-B' : A-A' :

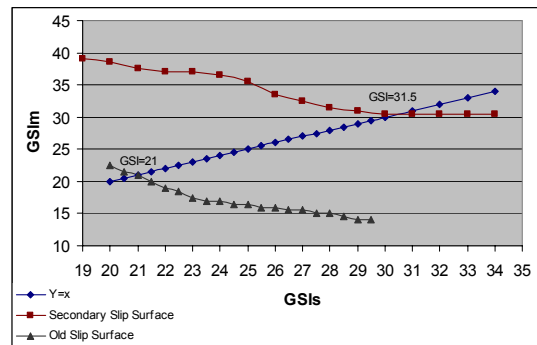
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GeoLink

Material	UCS (MPa)	m_i	d_f	Unit weight (kN/m^3)	Slope height (m)	$GSI_{m \text{ min}}$	$GSI_{m \text{ max}}$
Secondary slip surface	5	6	0.99	26	35,45	5	30
Ancient slip surface	5	6	0.99	26	60	10	40

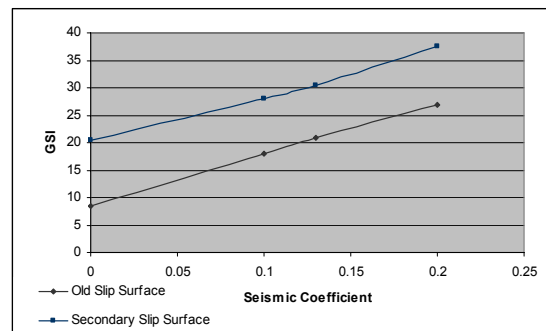
GeoLink

Ancient slip surface		Secondary slip surface 1		Secondary slip surface 2	
GSI_m	GSI_s	GSI_m	GSI_s	GSI_m	GSI_s
35.5	25	33	25	22.5	20
33.5	26	32.5	26	21	21
32.5	27	32	27	19	22
31.5	28	32	28	17.5	23
31	29	31.5	29	16.5	25
30.5	30	30.5	30	16	26
30.5	31	30.5	31	15.5	27
30.5	32	30.5	32	15	28
30.5	33	30.5	33		
30.5	34	30.5	34		
$GSI_m=21$	$GSI_s=21$	$GSI_m=30.5$		$GSI_s=30.5$	



GeoLink

GSI



GSI

(s m GSI)

GSI

(ϕ c)

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