

結構構件計算詳細列式查核

案名: 民雄農工職業學校綜合圖書資訊大樓興建工程--圖號: S-03 (代表樓層:3F->3F)

P015-01-樓層: 3F, 梯代號: ST1, 位置: P015-01 [C:+344,6:+839], 梯寬: 200 cm, 級高: 15.48, 級深: 26, 踏步數: 31, 梯長: 938.041 cm

梯斜版長: $938.04 = \text{開根號}(15.48*15.48+26*26)*[\text{階數}]31$

#4		上端線筋-雙層雙向型	#4 上端線筋-雙層雙向型= $(938.04++[\text{握持長度Ld}]55*2)*[\text{排數}][\text{Int}(200/10)+1]/100 = 220.09 \text{ M}$	220.09
#3		上端點筋-雙層雙向型	#3 上端點筋-雙層雙向型= $[\text{單側接牆}](200+[\text{延伸}+\text{彎鉤Ldh}+A1](15+13.7)*1)*[\text{排數}][\text{Int}((938.041/15)+1)/100 = 144.09 \text{ M}$	144.09
#4		下端線筋-雙層雙向型	$(938.04++[\text{握持長度Ld}]55*2)*[\text{排數}][\text{Int}(200/10)+1)/100$	220.09
#3		下端點筋-雙層雙向型	$[\text{單側接牆}](200+[\text{延伸}+\text{彎鉤Ldh}+A1](15+13.7)*1)*[\text{排數}][\text{Int}((938.041/15)+1)/100 = 144.09 \text{ M}$	144.09

模版計算:

模版(底模) = $938.04*200/10000 = 18.76 \text{ M2}$
 模版(立模) = $200*15.48*31/10000 = 9.60 \text{ M2}$
 模版(側邊-封單邊) = $938.04*15*1/10000 = 1.41 \text{ M2}$
 模版(踏步側邊-封單邊) = $(15.48*26/2)*31*1/10000 = 0.62 \text{ M2}$
 模版_小計 = $18.76+9.60+1.41+0.62+0.00 = 30.39 \text{ M2}$

RC計算:

RC(斜版) = $938.041*200*15/1000000 = 2.814 \text{ M3}$
 RC(階梯) = $(15.48*26/2)*200*31/1000000 = 1.248 \text{ M3}$
 RC_小計 = $2.814+1.248+0.000 = 4.062 \text{ M3}$

額外增減計算:

+/- 鋼筋:
 #4 : $(120*938.0/15*1*2)/100 = 150.08 \text{ M}$
 #5 : $(938.0*2)/100 = 18.76 \text{ M}$
 #4 : $(938.0*1)/100 = 9.38 \text{ M}$
 #5 : $((400+24*2+19*2)*4*2)/100 = 38.88 \text{ M}$
 -----計算結果小計-----

鋼筋計算結果:

#3=288.178 M ($288.178 \text{ M}*0.560/1000 = 0.1614 \text{ T}$)
 #4=599.637 M ($599.637 \text{ M}*0.994/1000 = 0.5960 \text{ T}$)
 #5=57.640 M ($57.640 \text{ M}*1.560/1000 = 0.0899 \text{ T}$)

鋼筋小計 = 0.8473 T

模版小計 = 30.39 M2

混凝土小計 = 4.062 M3