SGS

材料及工程實驗室-台北

TAF Civil Engineering Laboratory 1134

試 驗 報 告

報告編號： HS-13-05845Y
C-13- 19403
頁 數： 1 OF 2
報告日期： 102年 08月01日

壹、案件

1. 工 程 名 稱：中悅信住建設蘆洲水湳案新建工程
2. 業 主：晃茂營造股份有限公司
3. 承 包 商：眾竣工程有限公司
4. 委 託 單 位：晃茂營造股份有限公司
5. 供 料 廠 商：眾竣工程有限公司
6. 結 構 部 位：9F柱鋼筋
7. 取 樣 人 員：晃茂營造股份有限公司(馬上智)
8. 送 驗 人 員：晃茂營造股份有限公司(馬上智)、眾竣工程有限公司(林宜欣)
9. 會 驗 人 員：晃茂營造股份有限公司(許智瑋)
10. 取 樣 日 期：102年07月10日
11. 收 件 日 期：102年07月19日
12. 試 驗 日 期：102年07月31日
13. 會 驗 日 期：102年07月31日
14. 備 註：1. 以上資料由顧客提供(收件及試驗日期除外)
    2. 本實驗室為公共工程材料實驗室認證服務計畫認可實驗室

貳、樣品名稱：冷鍛滾牙式鋼筋續接器

1. 母 材：D36-1支
2. 續 接 器：D36-1支

參、試驗方法：中國土木水利工程學會混凝土工程設計規範與解說-土木401-1997 附錄乙

1. 母材拉力試驗依CNS 2111-G2013、CNS 2112 G2014規範辦理試驗
2. 高塑性反覆載重試驗：
   $0 \rightarrow (0.95P_y \longleftrightarrow -0.5P_y)_{16回} \rightarrow (5\varepsilon_{ya} \longleftrightarrow -0.5P_y)_{8回} \rightarrow (10\varepsilon_{ya} \longleftrightarrow -0.5P_y)_{8回} \rightarrow$ 拉斷
   **母材標稱直徑：35.8mm
   鋼筋種類：CNS 560 SD420W，D36
   母材標稱降伏f_y：420 N/mm^2

肆、儀器與量測設備：

1. 加載試驗機：係採用本實驗室之鋼筋續接器專用試驗機配合油壓夾具．
2. 延伸計(長度變化量測設備)：
   係以特製量具(LVDT 2支)鎖緊於鋼筋上連接電腦．量具解析度0.001mm，
   試驗時以此設備直接測量變形量．
3. 鋼筋續接器續接性能試驗之量測長度(gage length) Lg取續接器長度加續接器兩側各1/2鋼筋直徑或2cm之大值，但量測長度小於500mm且無挫曲(Buckling)之慮時，可取500mm為量測長度．續接器設於量測長度之中央位置．
   本實驗D36母 材 Lg= 179mm
   D36續接器 Lg= 230mm
   母材E_{sa}值採用標稱值Es(199075N/mm^2)

規範要求值僅供參考，合格之判定以委託單位實際要求為準。

報 告 簽 署 人

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伍、試驗數據分析與結果：

1. 鋼筋母材試驗：

試件編號	降伏強度 $f_{ya}(N/mm^2)$	抗拉強度 $f_{ua}(N/mm^2)$	拉降比 f_{ua}/f_{ya}	伸長率 ε_{ua} (%)	降伏應變 ε_{ya}
D36R	454	670	1.48	19	0.00228
規範值	≧420 & ≦540	≧550	≧1.25	≧11	-

*母材試體合乎規範，因此續接器接合試體為有效試體．

2. 續接器接合鋼筋高塑性反覆載重試驗

2-1滑動量之測試結果

試片編號	滑動量						
	$(\delta_s)16_c$ (mm)	$(\delta_s)24_c$ (mm)	$(\varepsilon_s)24_c$ (%)	$(\varepsilon_s)24_c/\varepsilon_{ya}$	$(\delta_s)32_c$ (mm)	$(\varepsilon_s)32_c$ (%)	$(\varepsilon_s)32_c/\varepsilon_{ya}$
D36HP	0.135	0.212	0.092	0.403	0.270	0.118	0.516
規範要求(SA級)	≦0.3	≦0.9	-	≦1.5	≦1.8	-	≦3

2-2抗拉強度與伸長率之測試結果

試件編號	抗拉強度 $f_{uc}(N/mm^2)$	拉降比 f_{uc}/f_{ya}	伸長率* ε_{uc}(%)	破壞模式
D36HP	630	1.39	16	斷續接處外16cm
規範要求(SA級)	≧550	≧1.25	≧6	-

*Gage Length：500mm。

備註：

1. 本試驗之試樣及相關之試樣資料由委託單位提供．
2. 依客戶要求僅以ε_{uc}做為評定合格之標準．

報告簽署人

規範要求值僅供參考，合格之判定以委託單位實際要求為準。

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