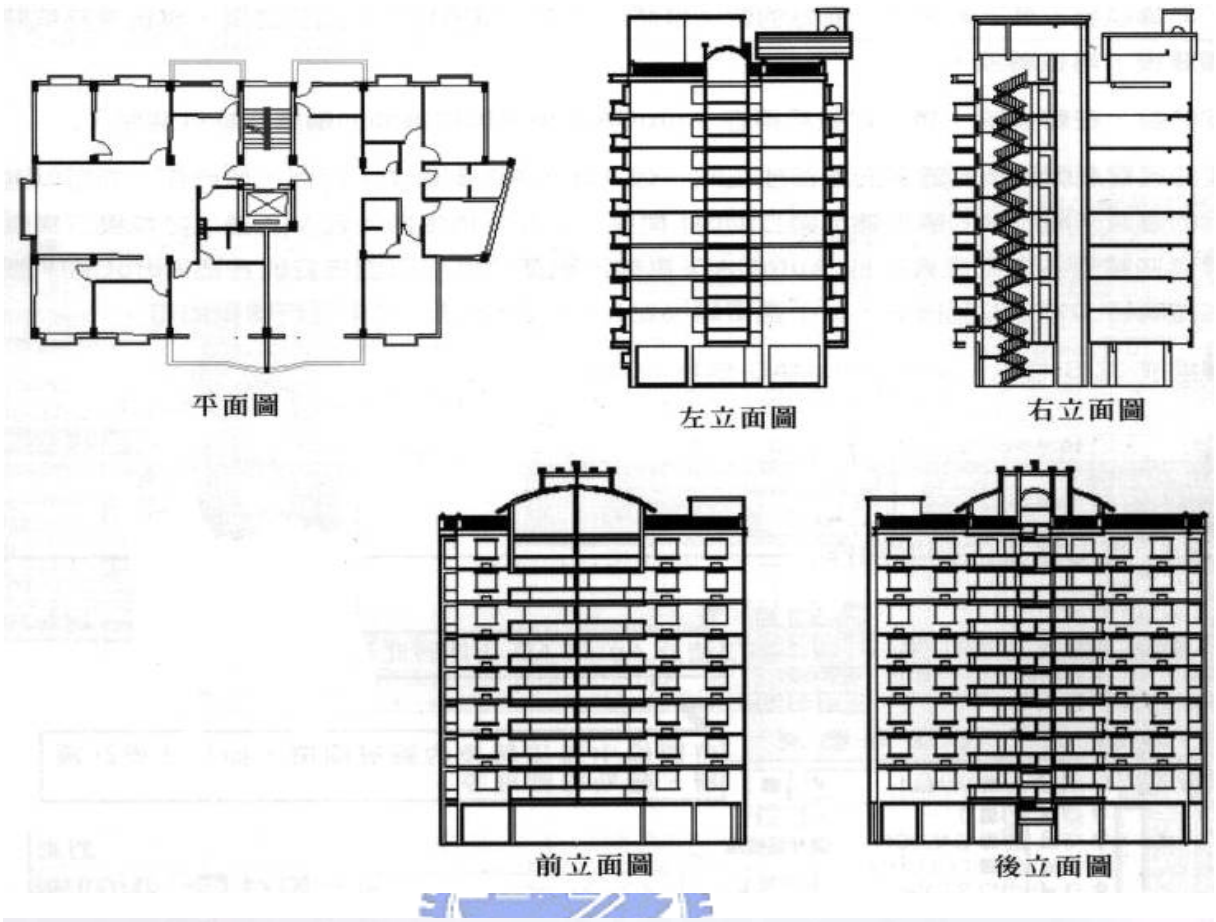


圖2-1 2D圖像與3D圖像在視覺呈現上的差異 [26]

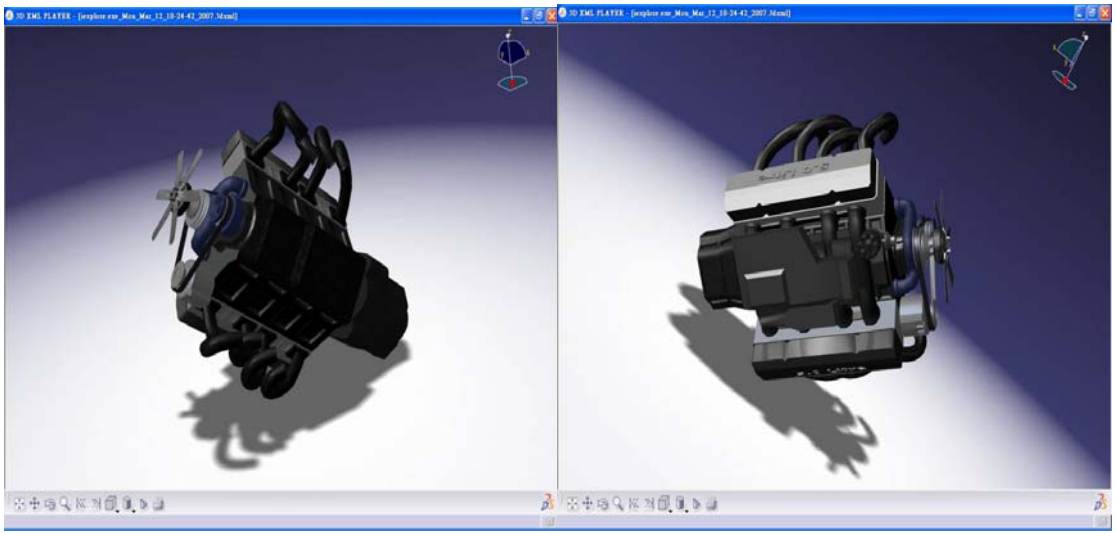


圖2-2 3D 數位模型從不同角度觀看

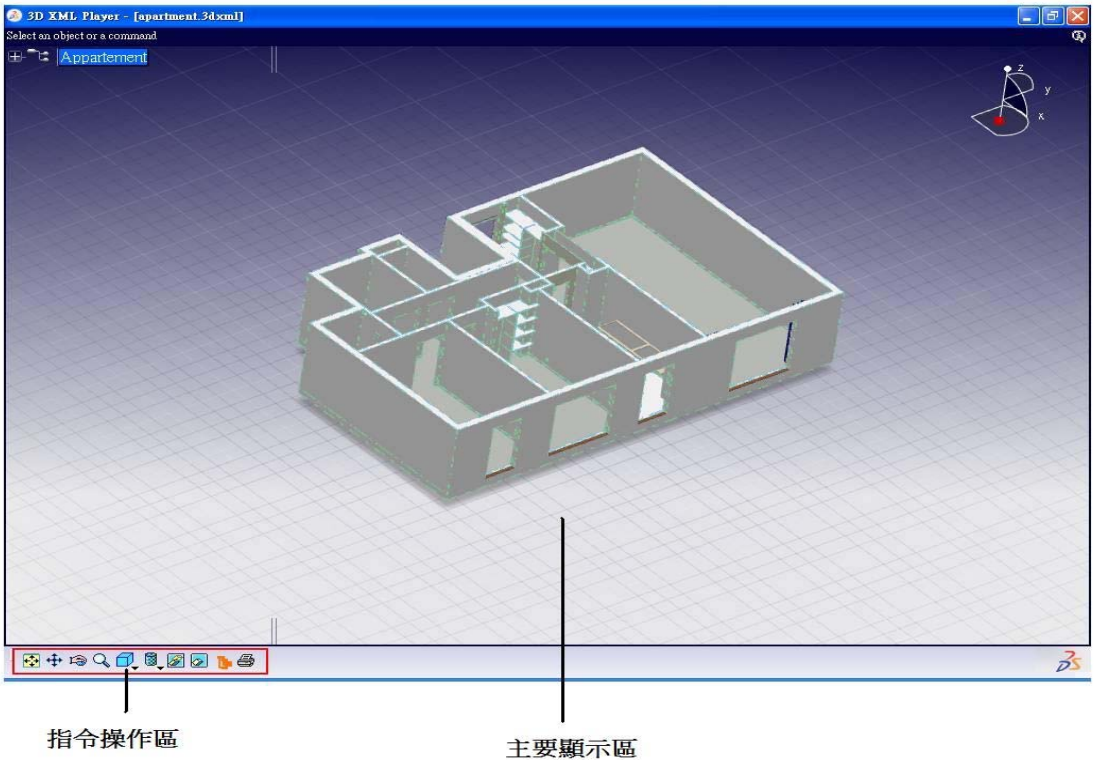


圖2-3 3D XML PLAYER畫面

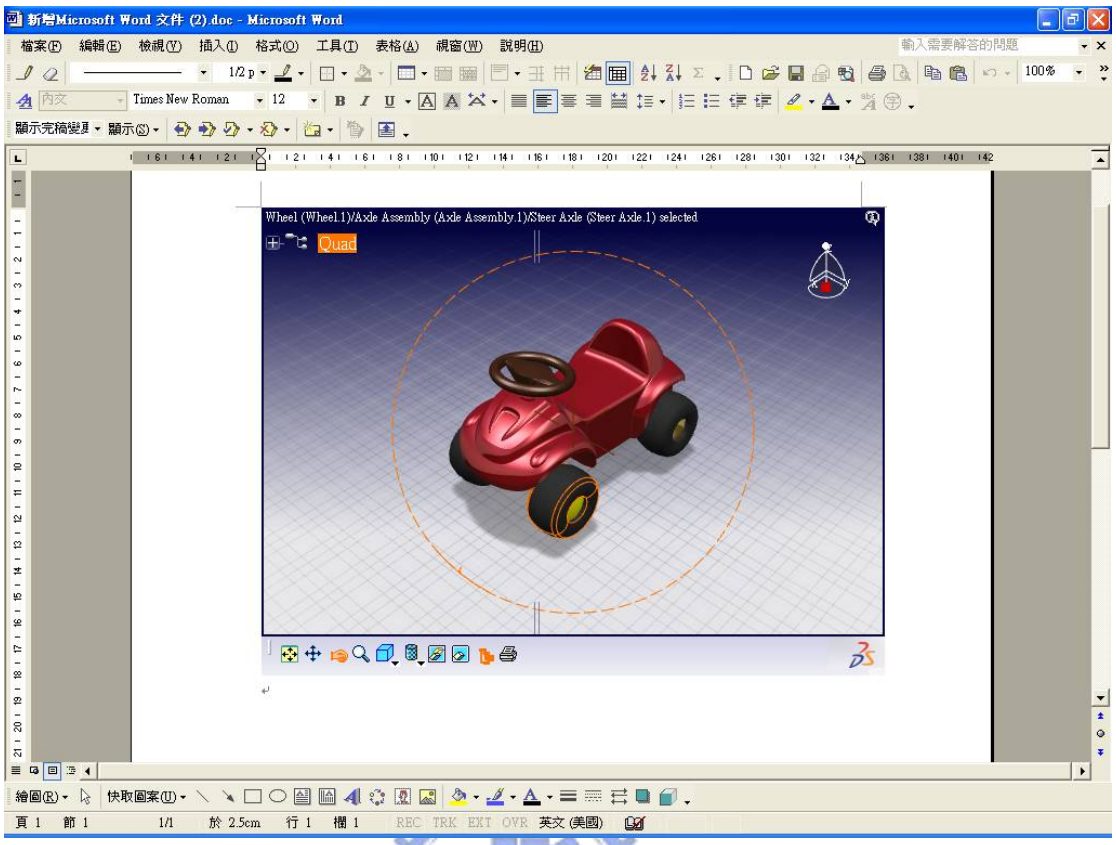


圖 2-4 3D XML檔案崁入Microsoft Word中

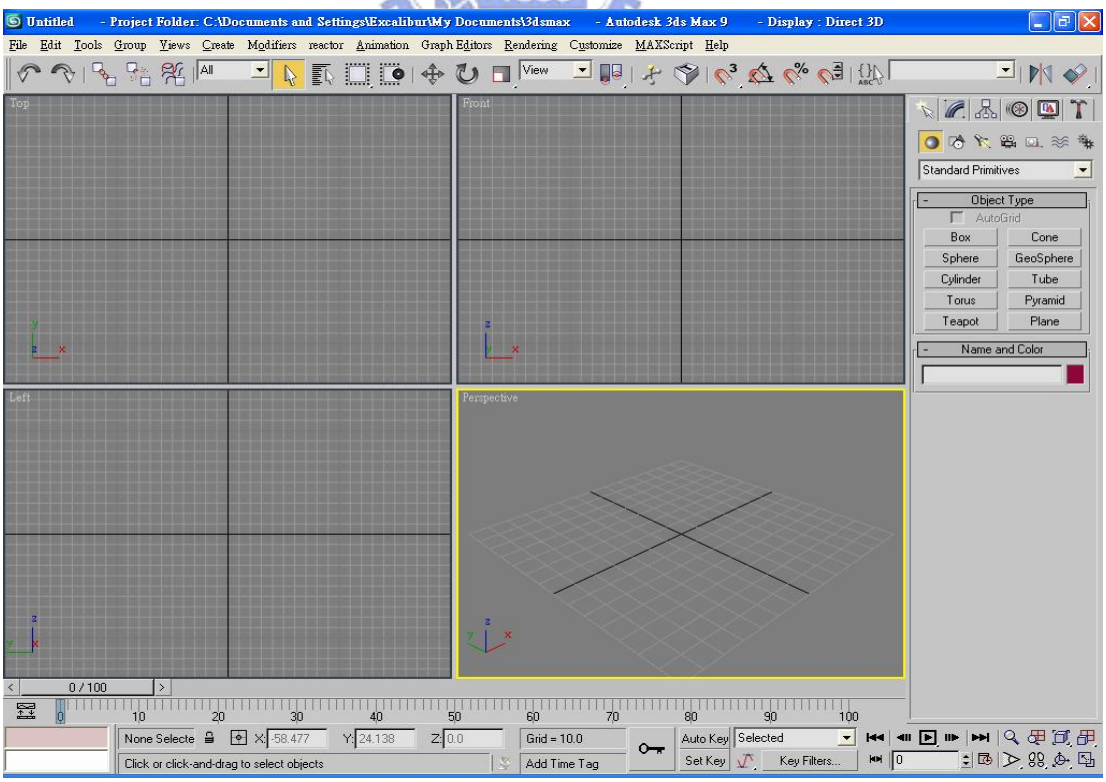


圖3-1　3ds Max 初始畫面

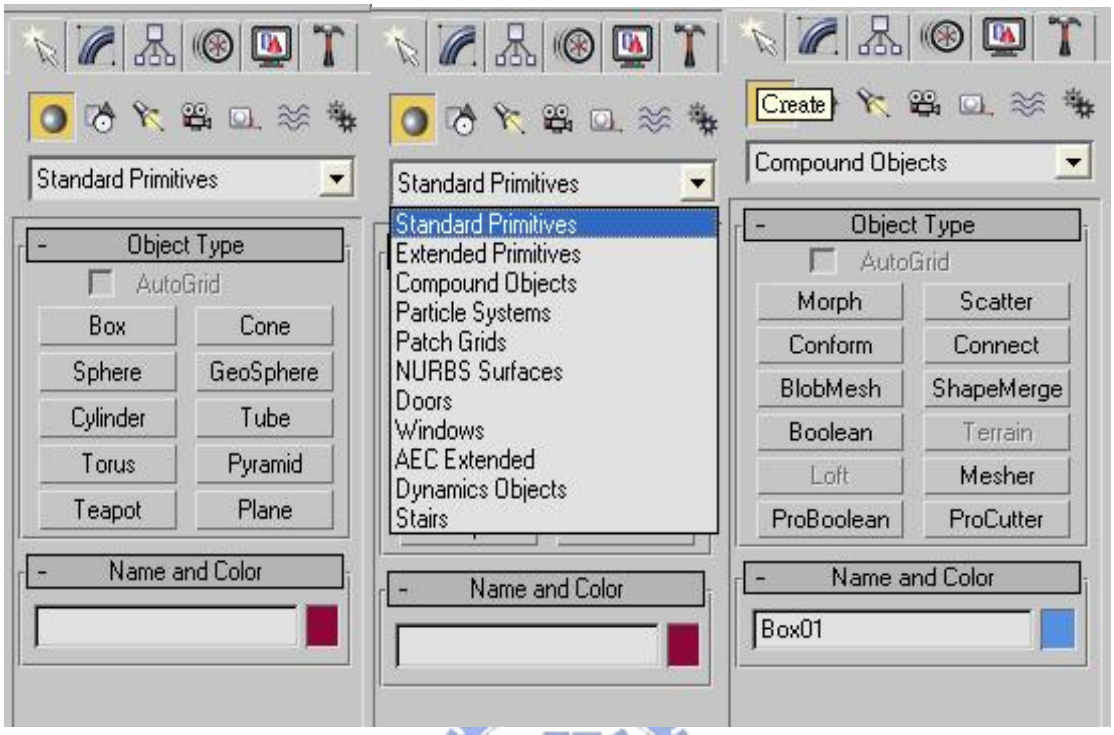


圖3-2　3ds Max各式指令面板

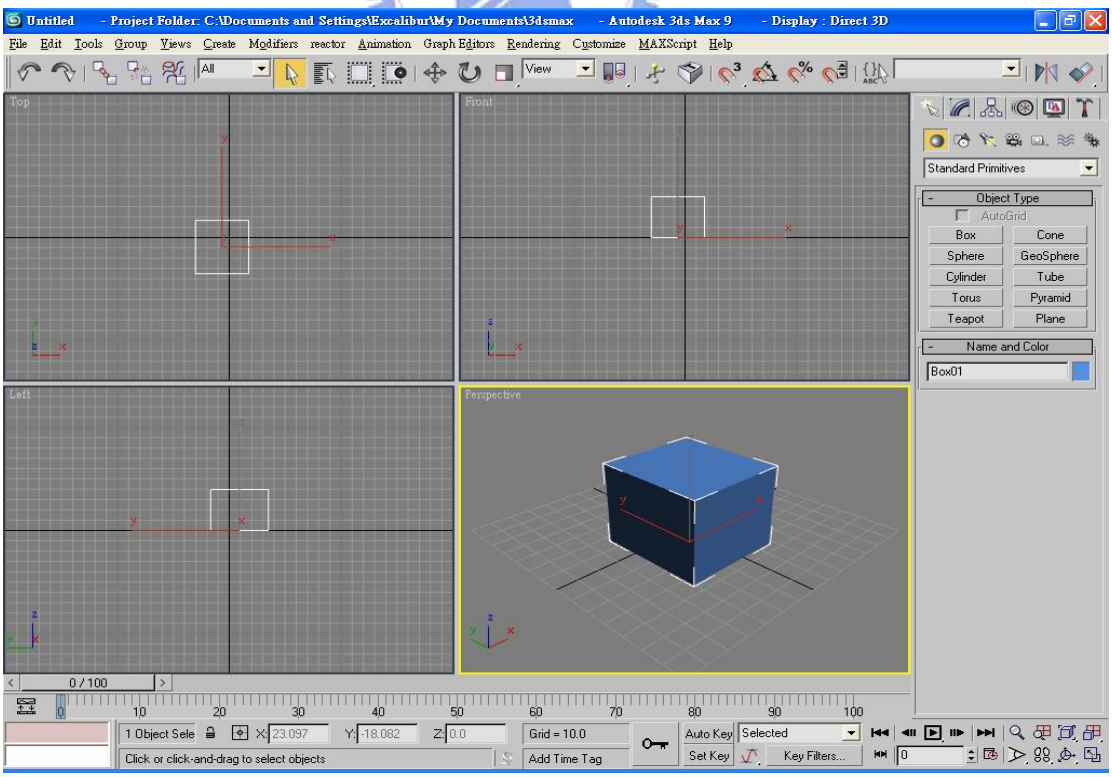


圖3-3　創造box形3D物件

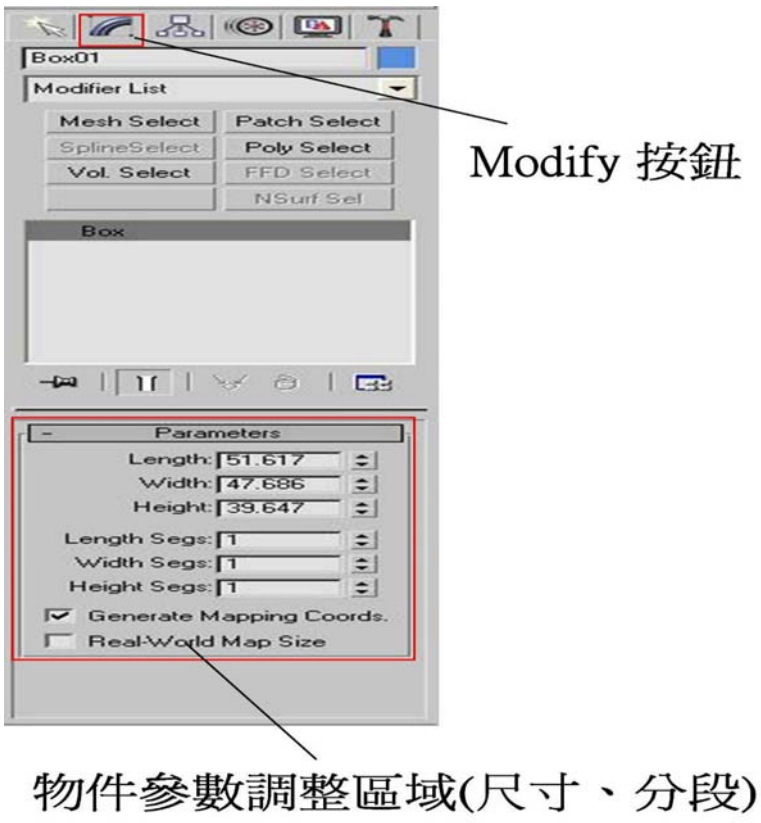


圖 3-4 物件Modify面板(對box物件時)

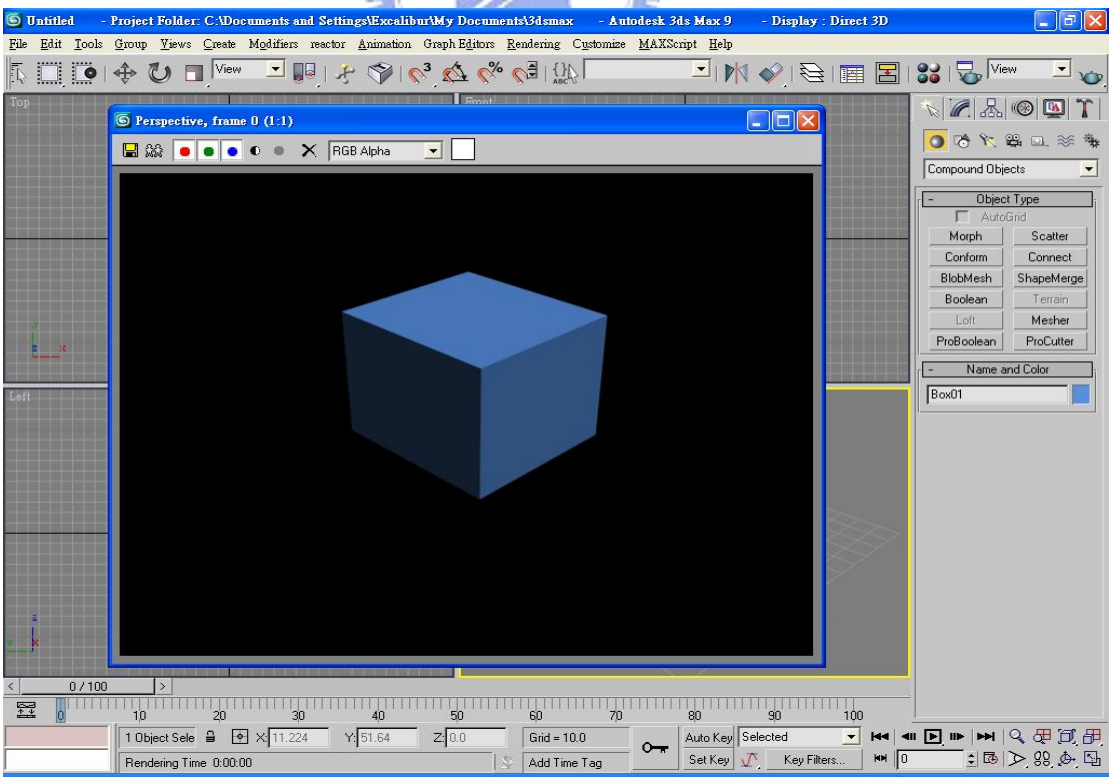


圖3-5 對box物件進行彩現的結果(未貼材質)

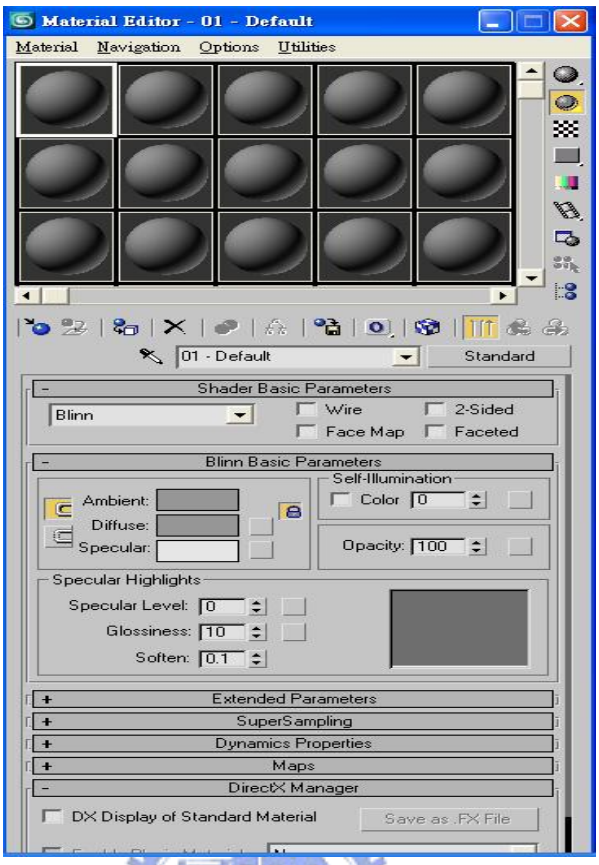


圖3-6　3ds Max材質編輯器

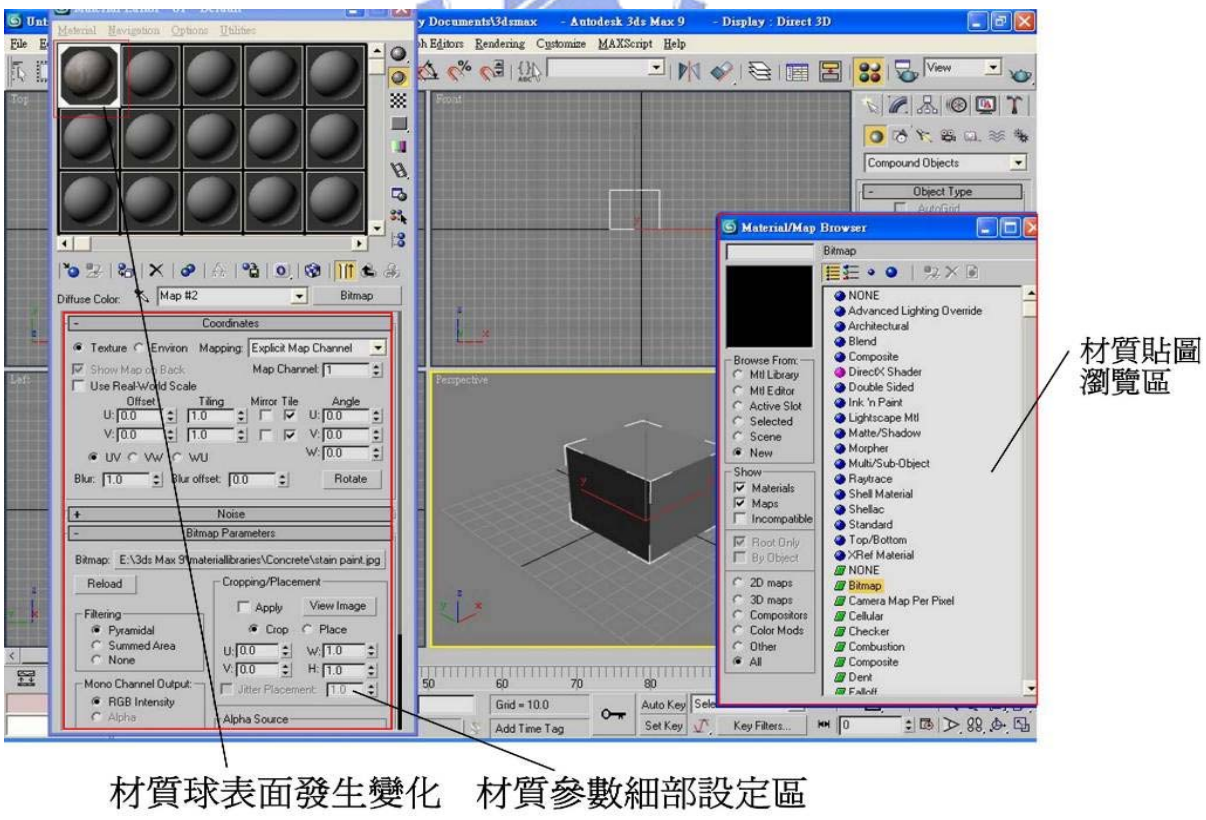


圖3-7 加入新材質至材質球中

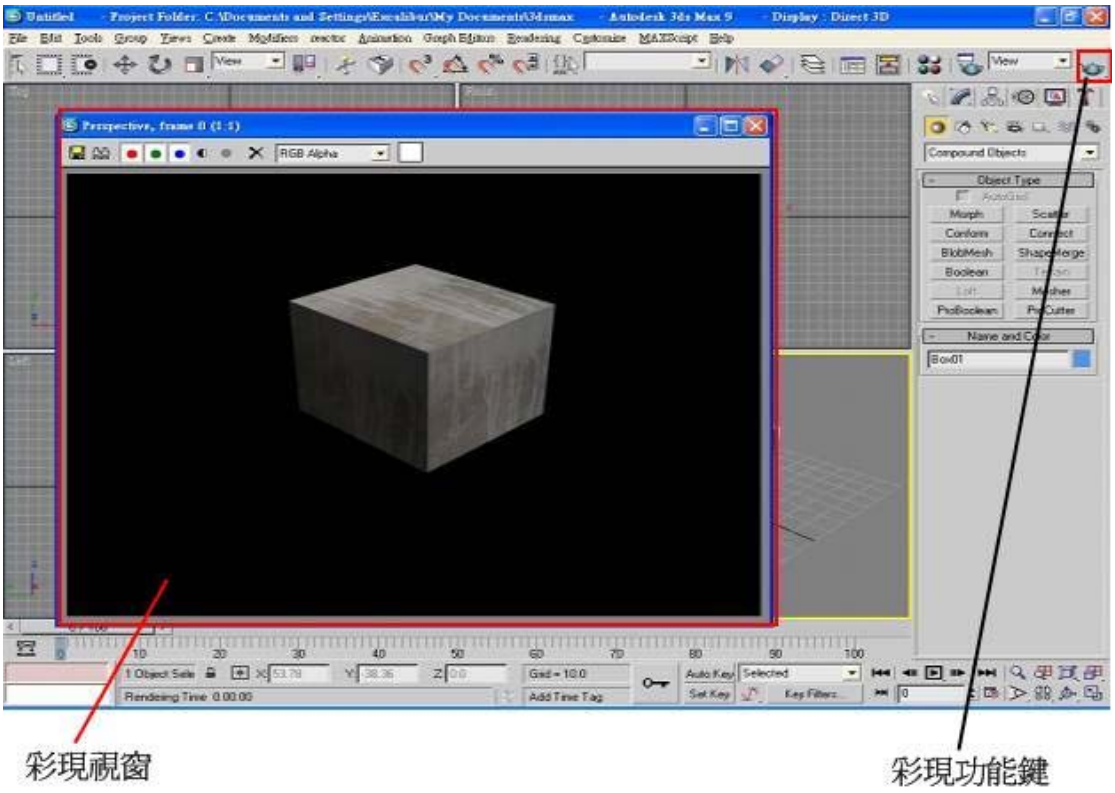


圖 3-8 box物件貼上混凝土材質後的彩現效果

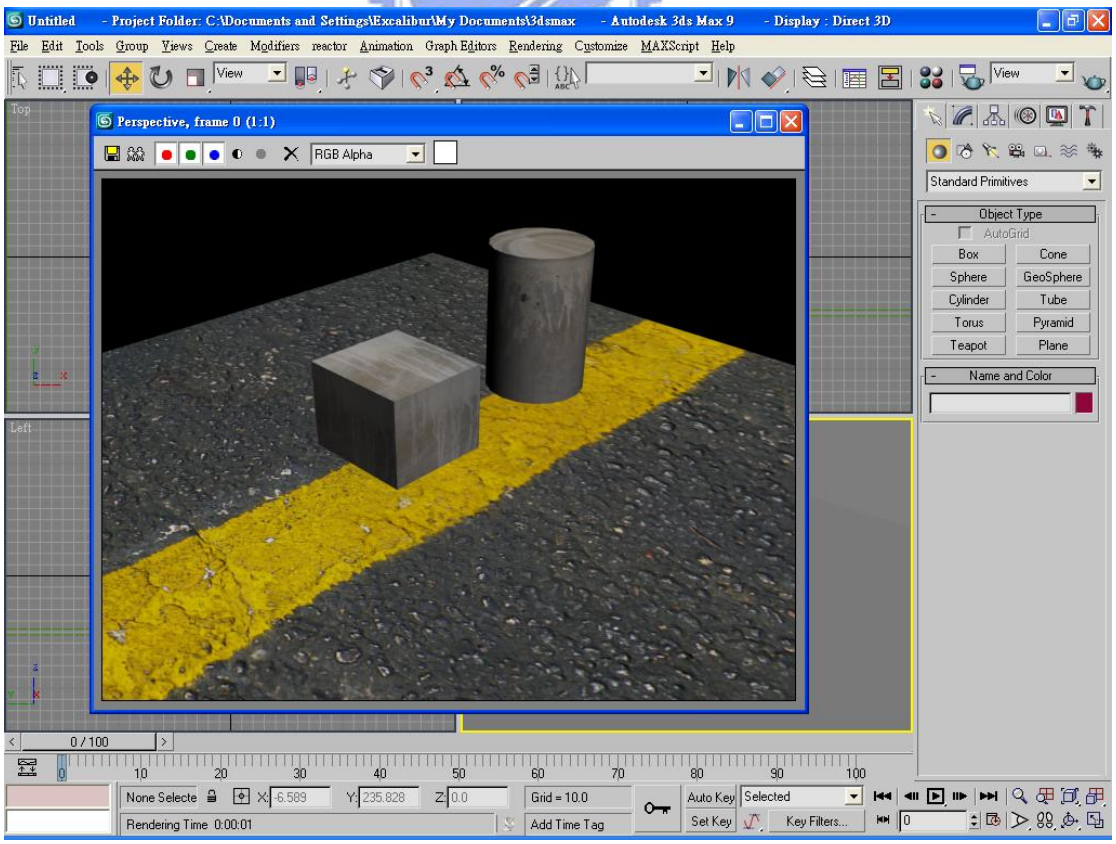


圖3-9　複數物件以及不同材質

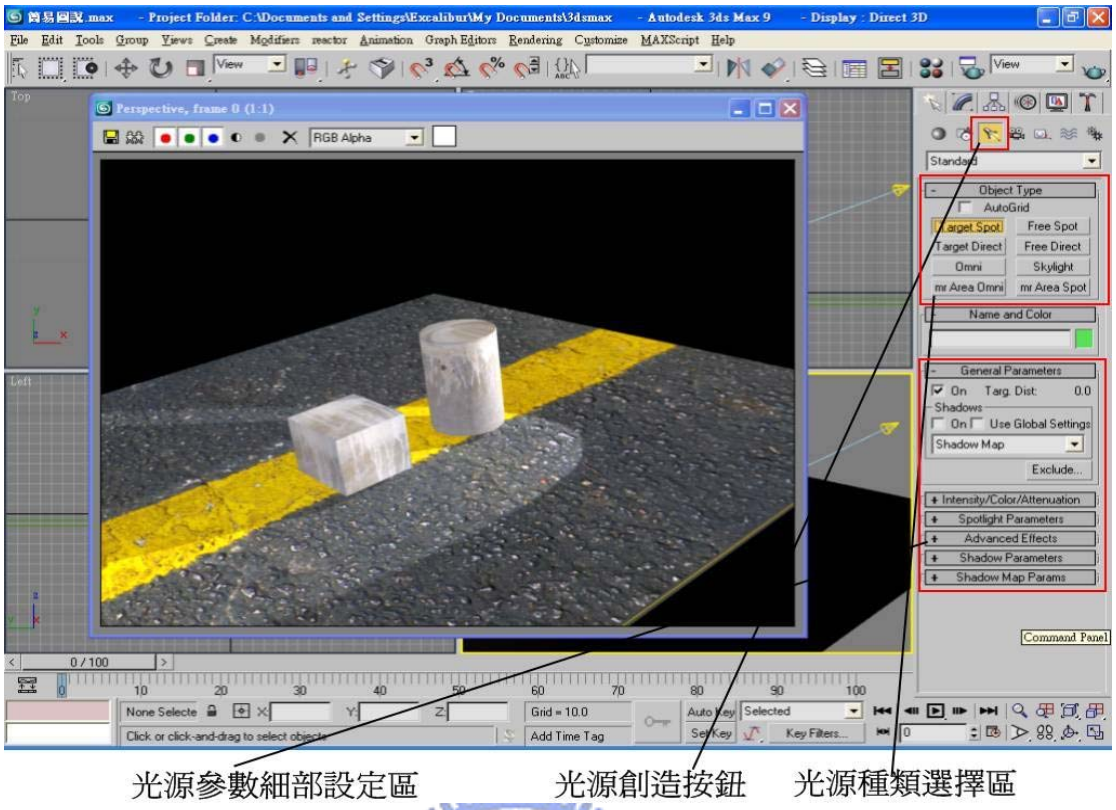


圖3-10　3ds Max光影處理

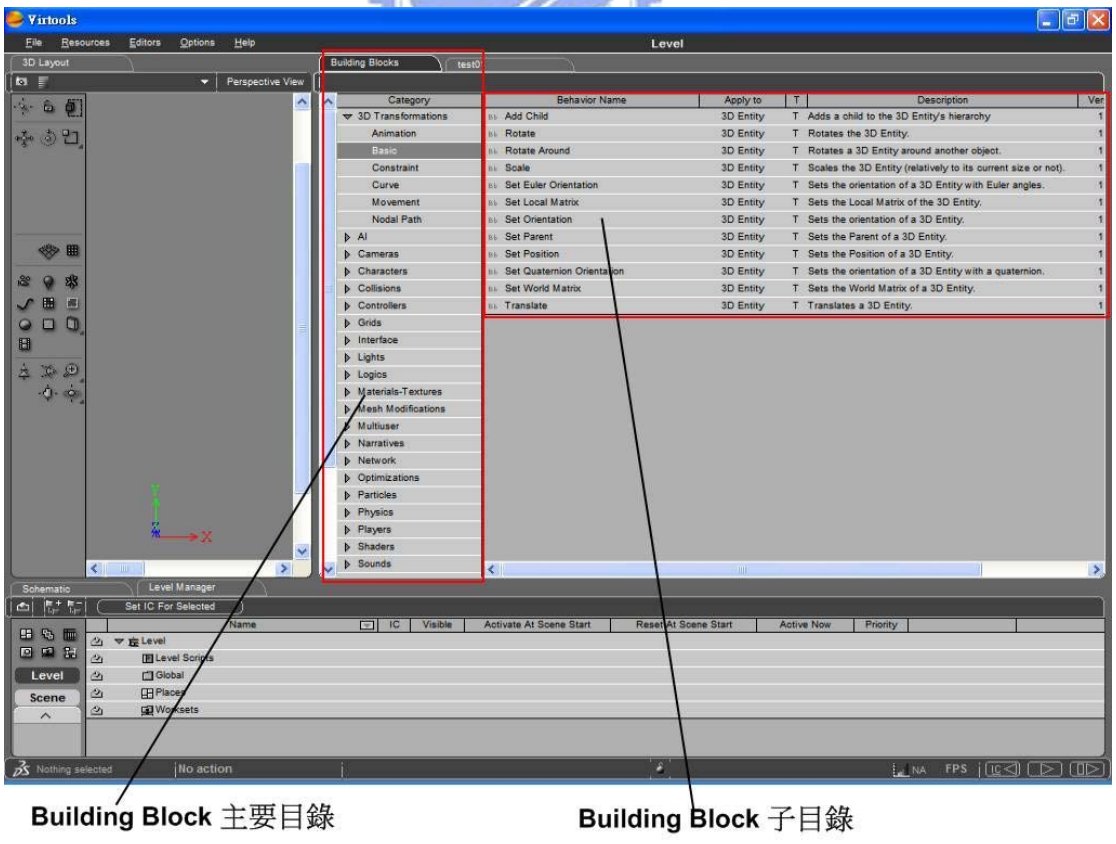


圖 3-11 Virtools 的Building Block架構

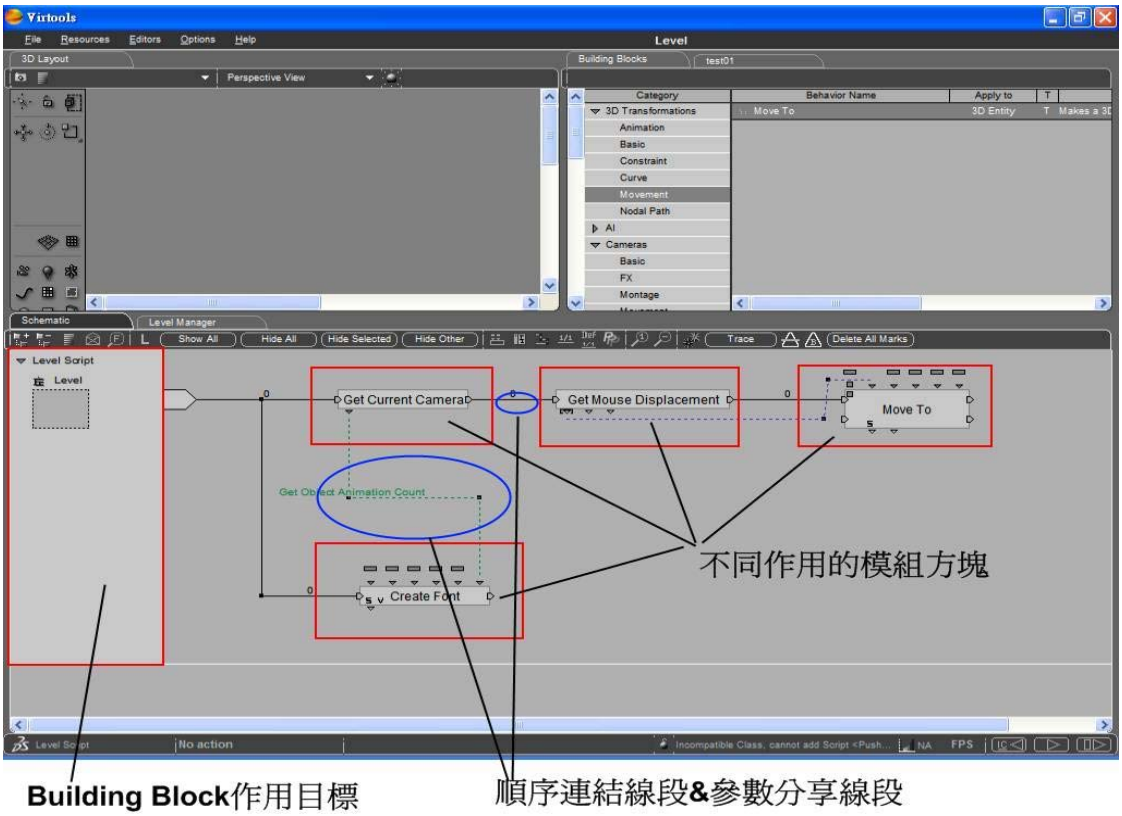


圖 3-12 由數個Building Block 組成的物件行爲腳本

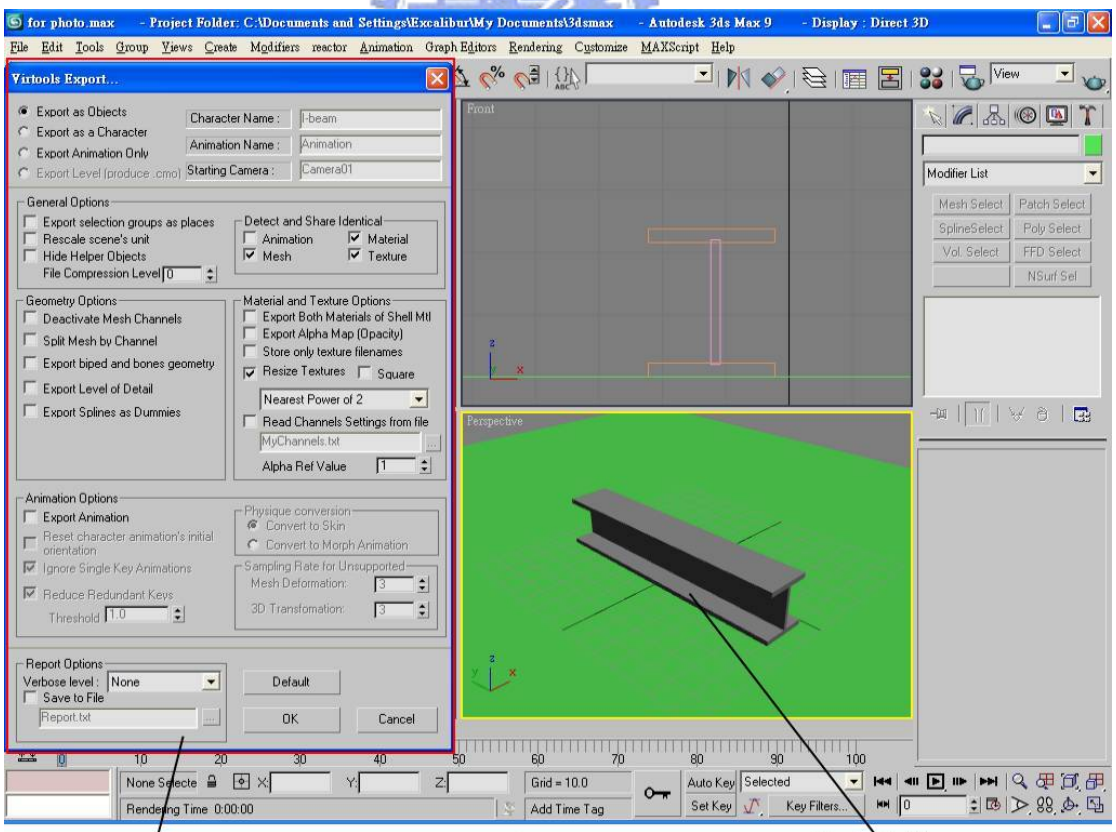


圖3-13 3ds Max 中的Virtools Export介面

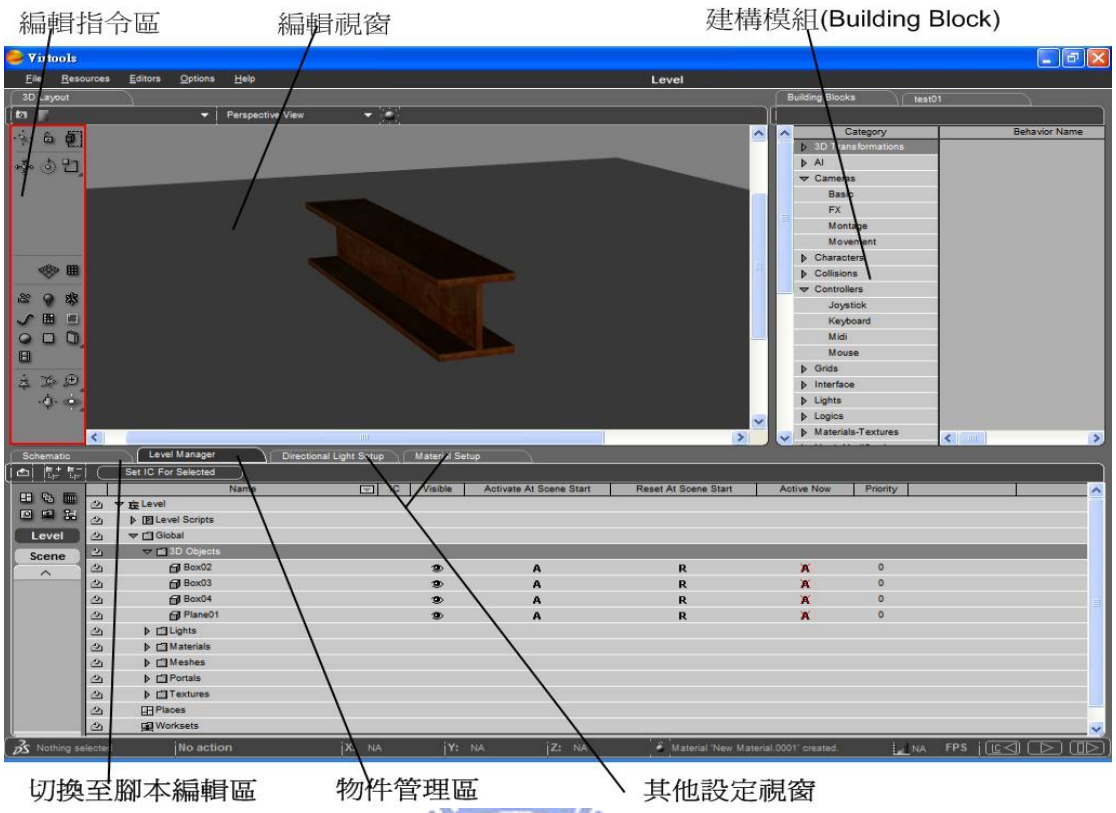


圖3-14 匯入模型並加入簡單光源後的畫面

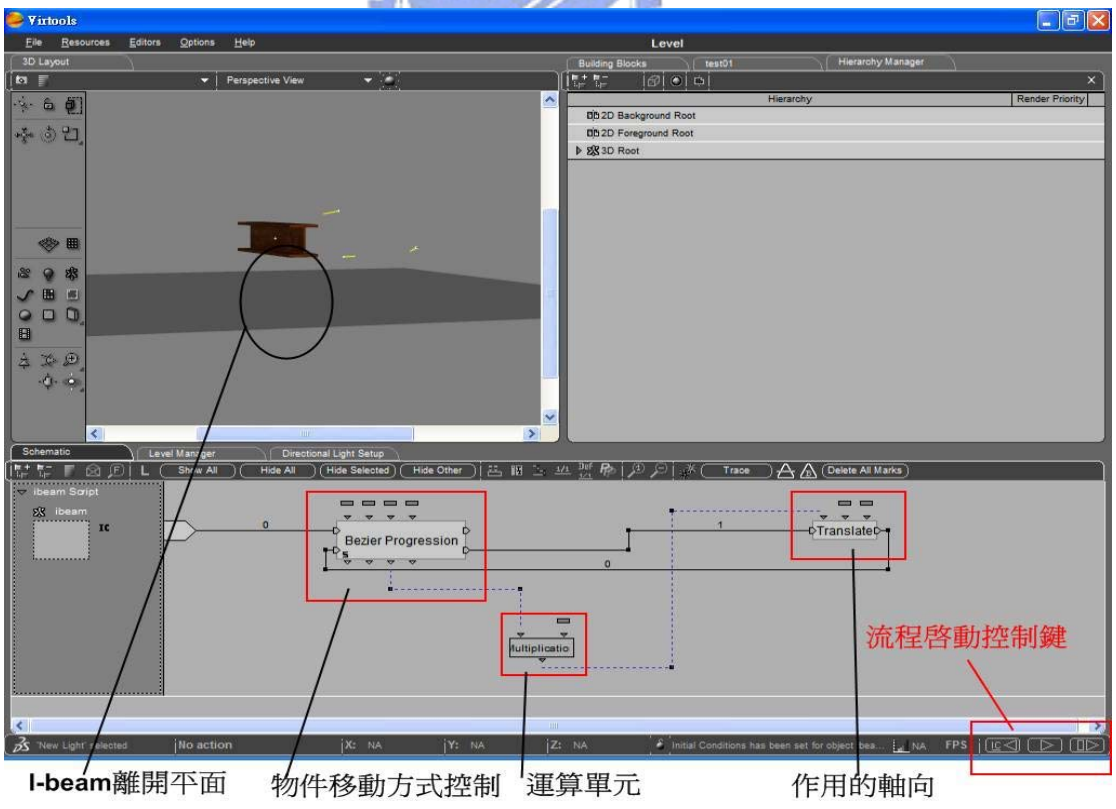


圖 3-15 利用Building Block控制I-beam移動

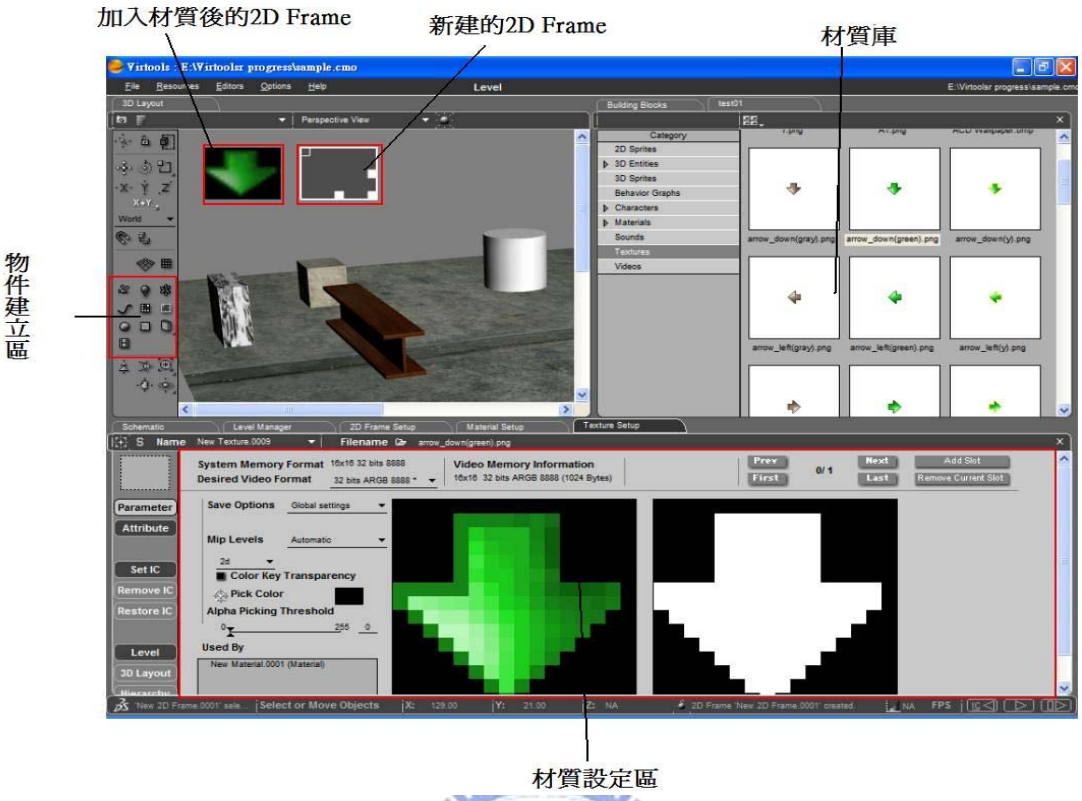


圖3-16 2D Fram、Icon以及材質建立

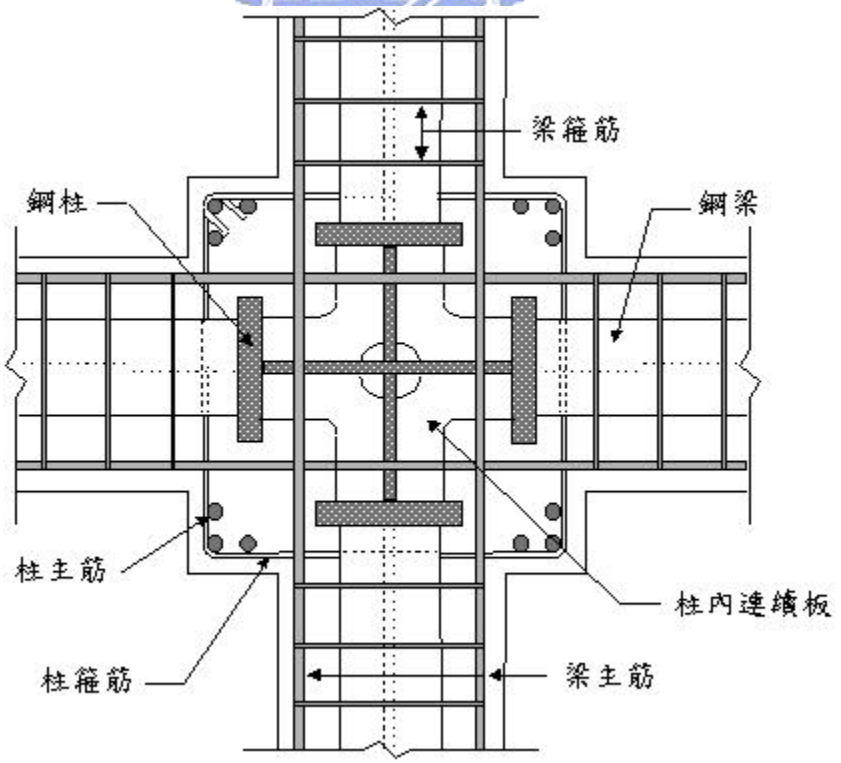


圖 4-1 包覆型SRC梁柱接頭之接合細部示意圖 [27]

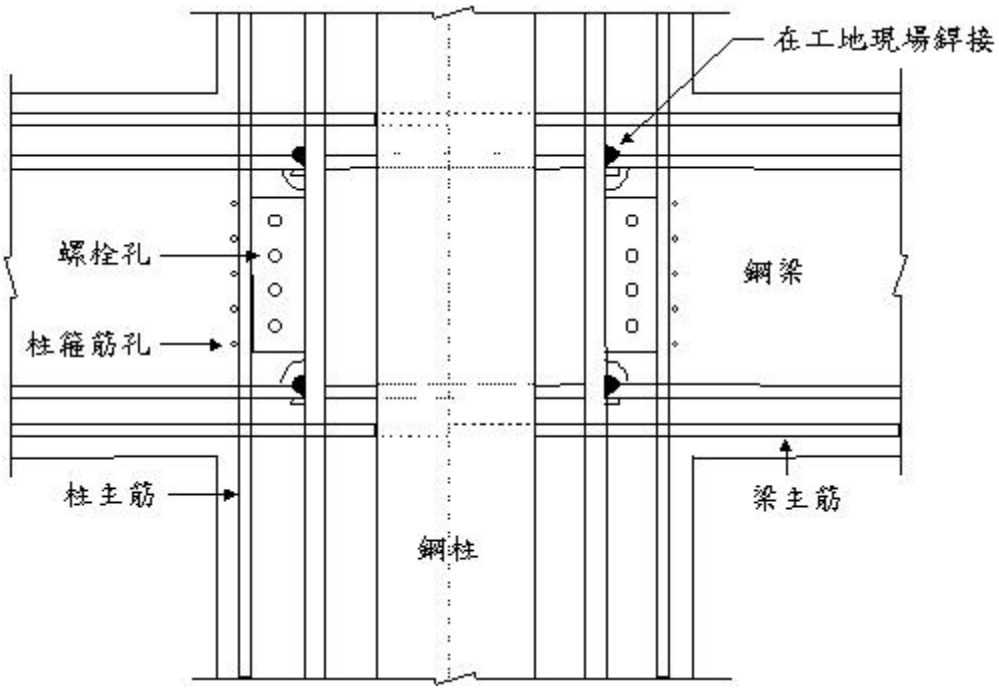


圖 4-2 SRC梁柱接頭示意圖(鋼骨接合採用工地銲接方式) [27]

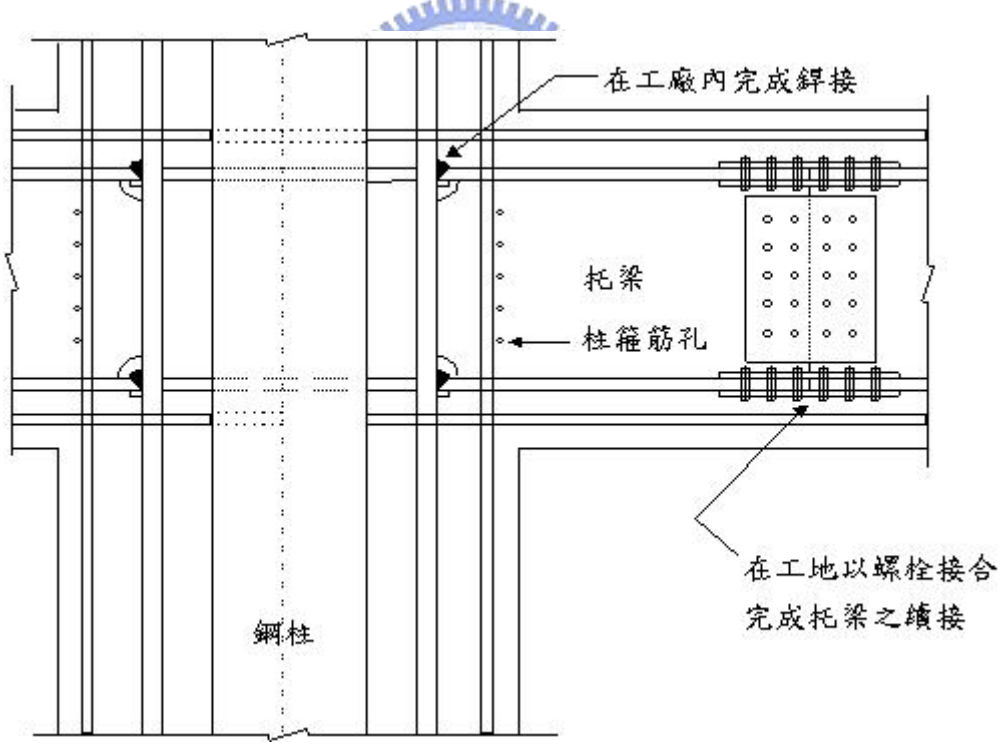


圖 4-3 SRC梁柱接頭示意圖(鋼骨接合採用托梁續接方式) [27]

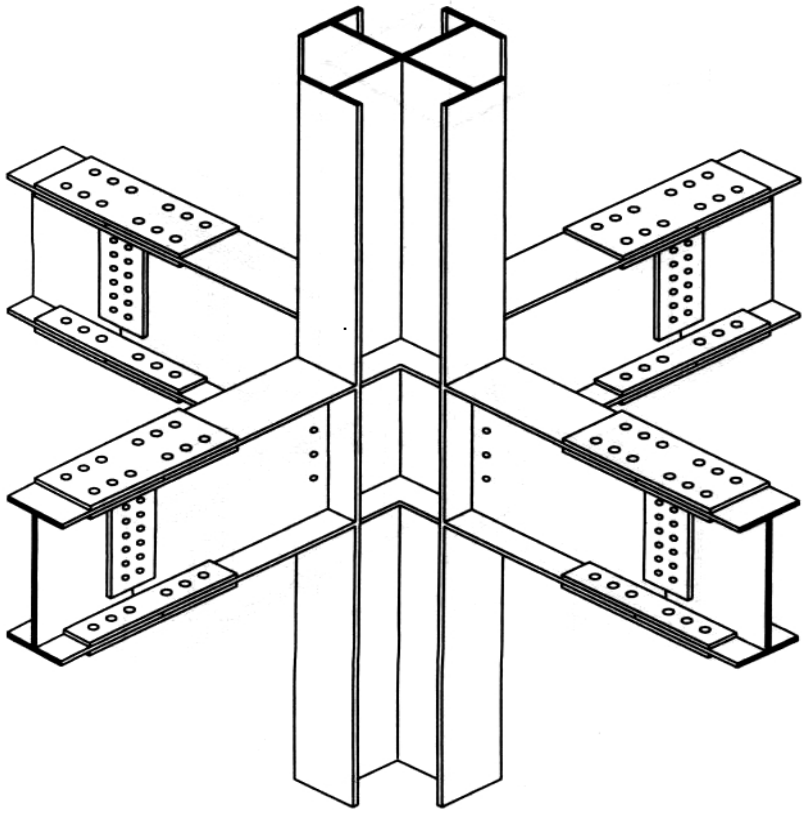


圖 4-4 十字型鋼柱之梁柱接頭採用托梁螺栓接合之示意圖 [27]

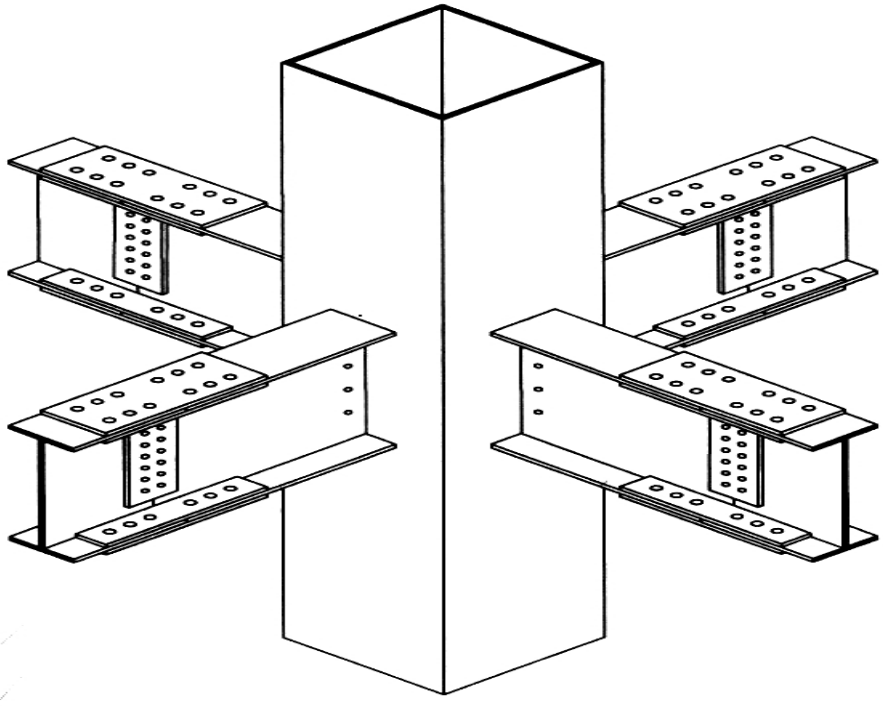


圖4-5 箱型鋼柱之梁柱接頭採用托梁螺栓接合之示意圖 [27]

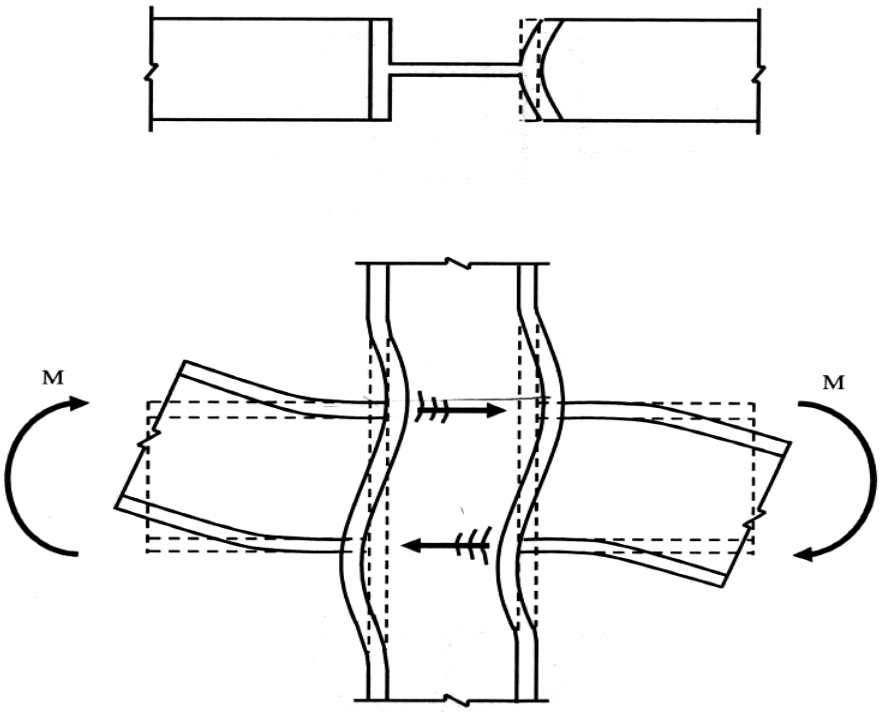


圖 4-6 未含連續板之梁柱接頭可能的失敗模式 [27]

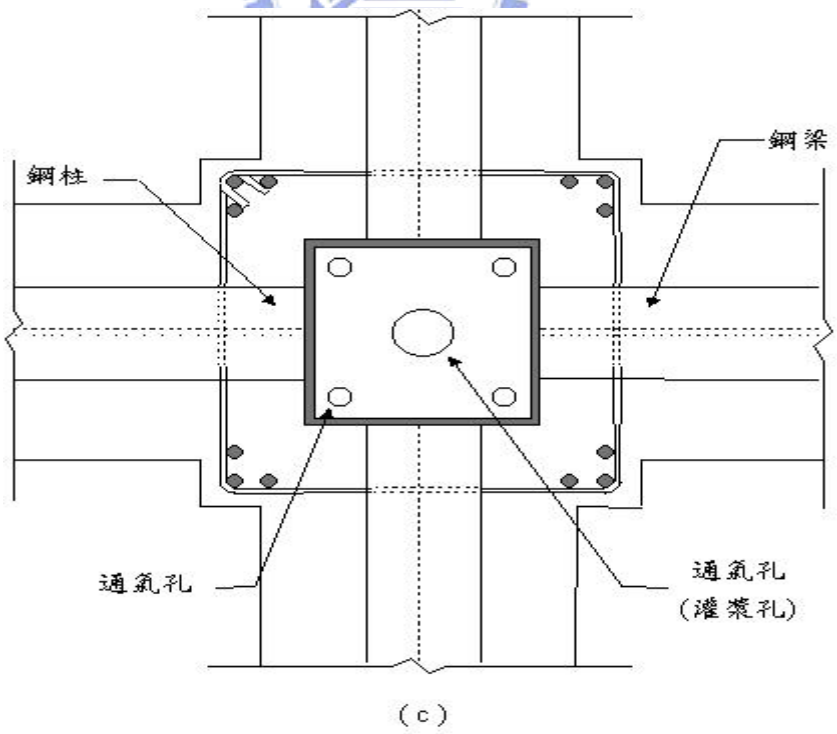


圖 4-7 SRC柱內之連續板適當開孔以利澆置及填充混凝土 [27]

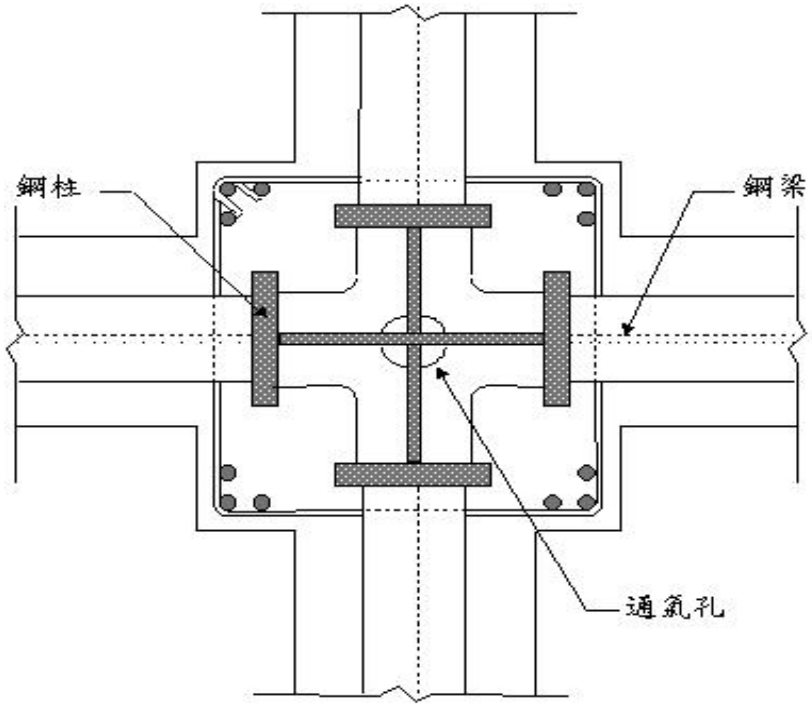


圖 4-8 SRC柱內之連續板適當開孔以利澆置及填充混凝土 [27]

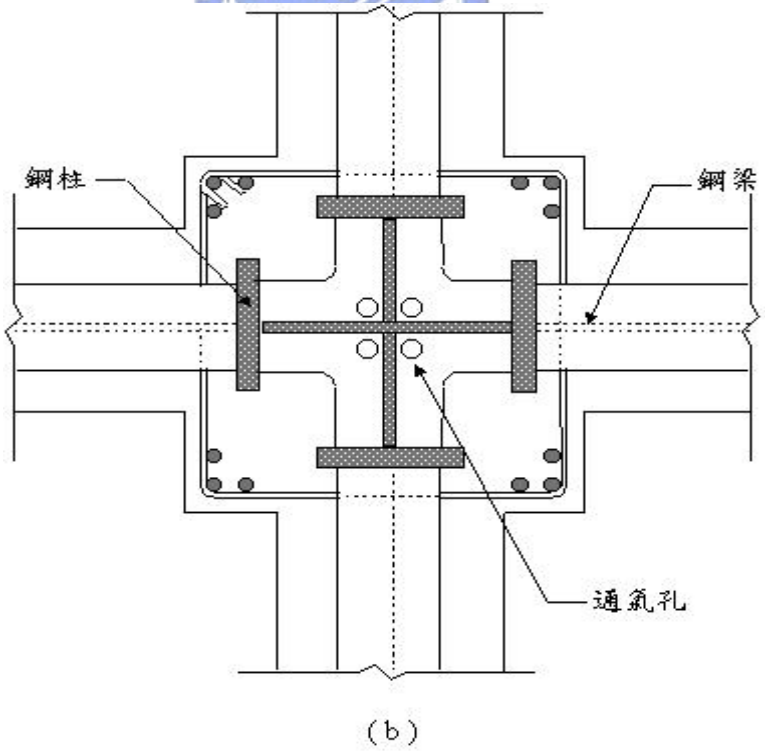


圖 4-9 SRC柱內之連續板適當開孔以利澆置及填充混凝土 [27]

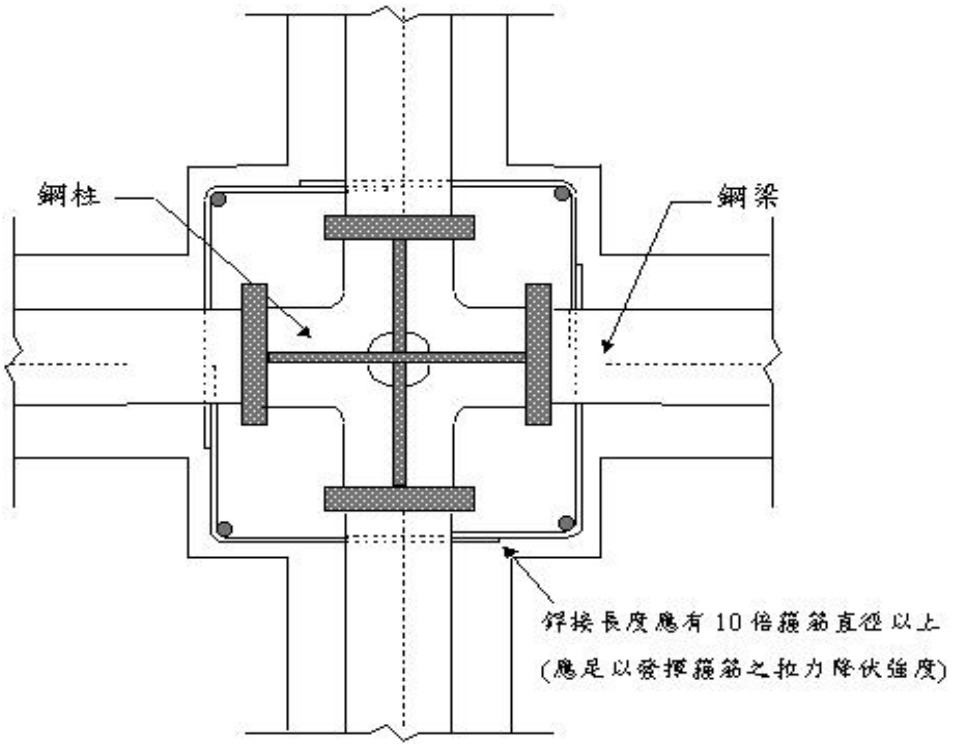


圖 4-10 SRC梁柱接頭採用四支L型箍筋焊接組合之形式 [27]

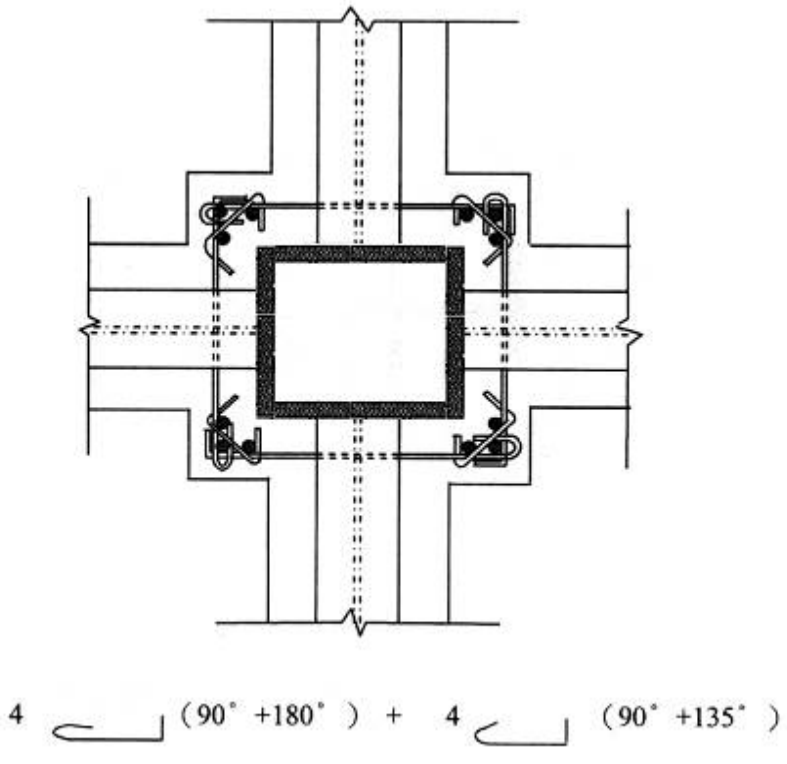


圖 4-11 SRC梁柱接頭區採用無焊接箍筋配置示意圖 [27]

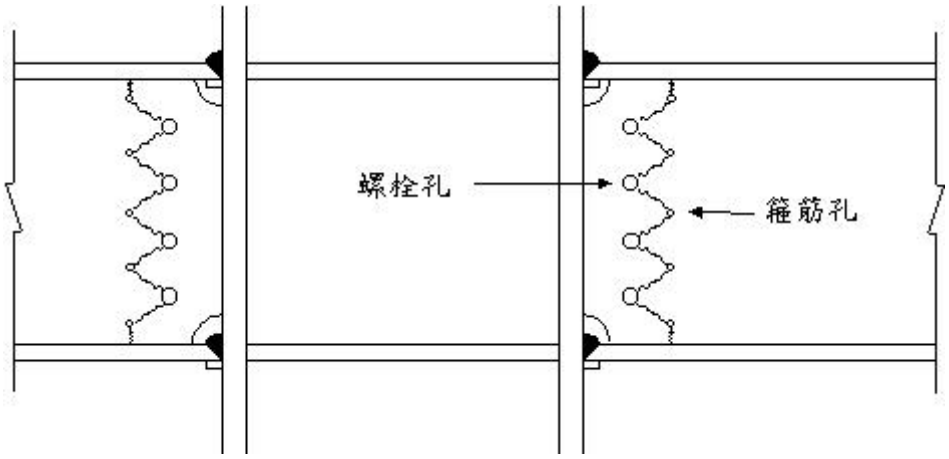


圖4-12SRC梁柱接頭螺栓孔與箍筋孔太近造成鋼梁腹板撕裂破壞 [27]

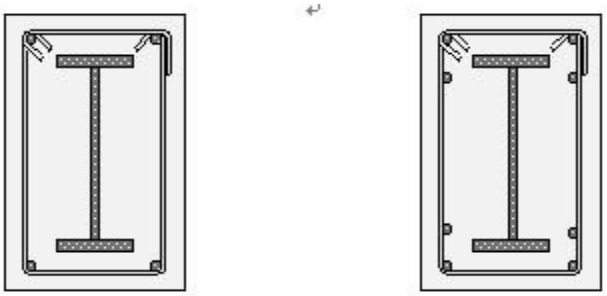


圖 4-13包覆型SRC梁斷面及配筋示意圖 [27]

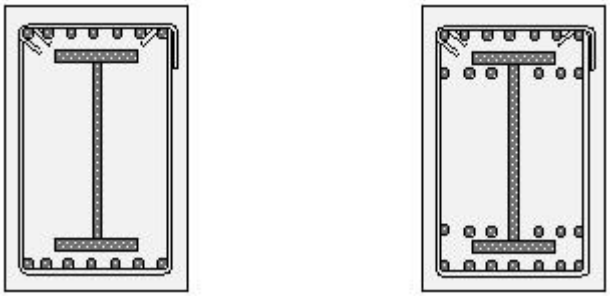


圖 4-14配筋太密的SRC梁斷面(梁柱構架中不建議使用) [27]

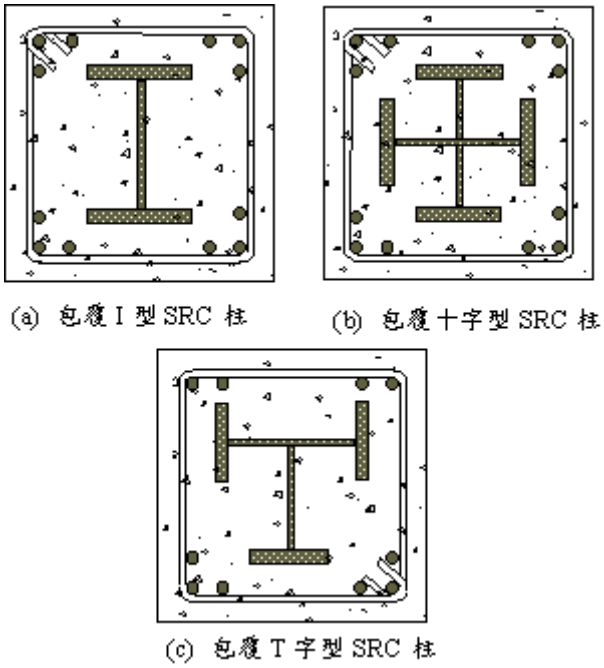


圖 4-15包覆型SRC柱斷面 [27]

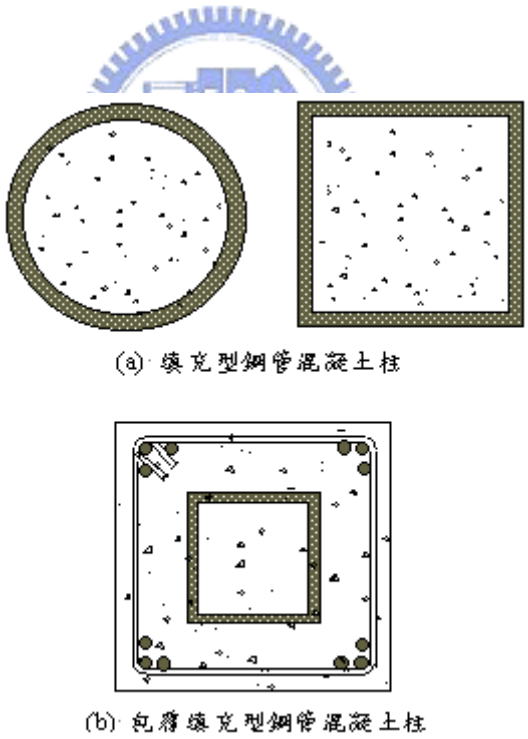


圖 4-16鋼管混凝土柱斷面示意圖 [27]

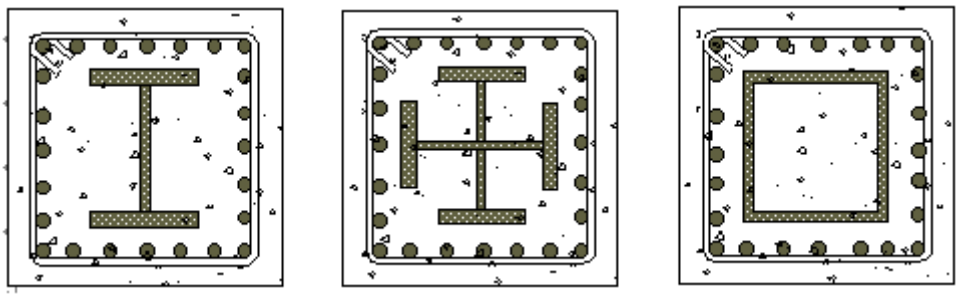


圖 4-17配筋太密的SRC柱斷面 [27]

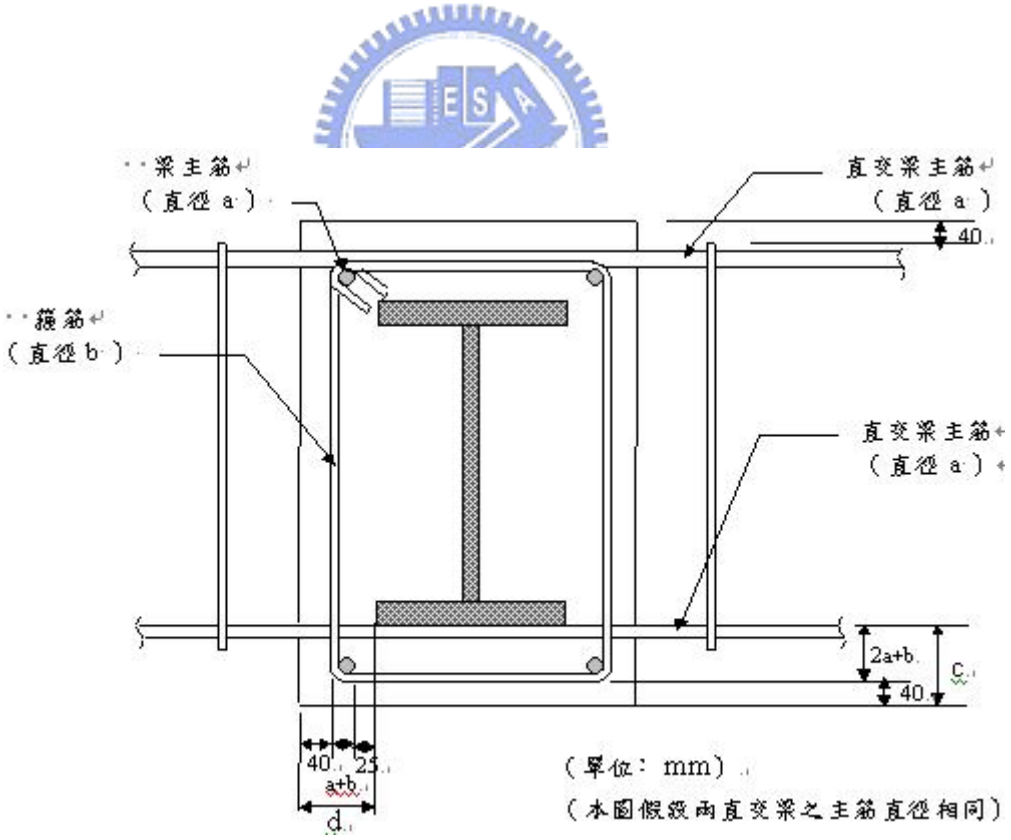


圖 4-18 SRC梁斷面配置細部示意圖 [27]

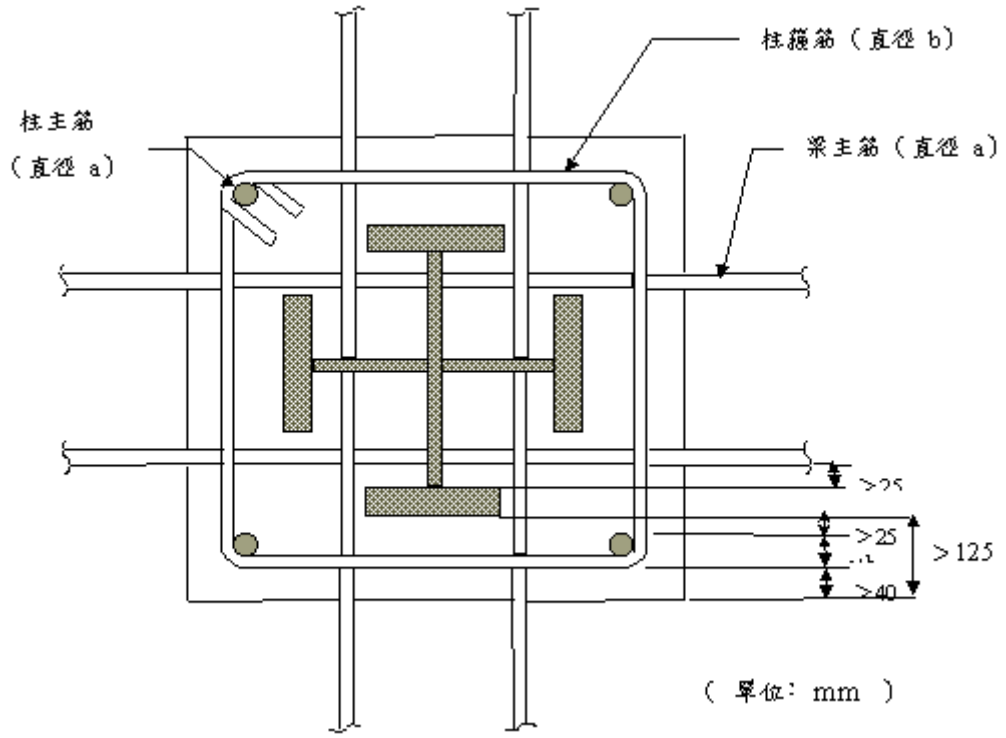
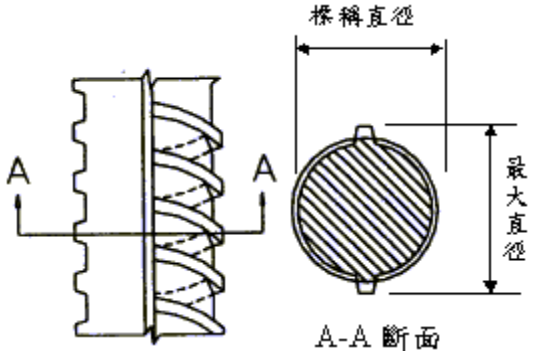


圖 4-19SRC柱斷面配置細部示意圖 [27]



鋼筋號數	標稱直徑 (mm)	最大直徑 (mm)
#3	10	11
#4	13	14
#5	16	18
#8	25	28
#9	29	33
#10	32	36
#11	35	40

圖 4-20 竹節鋼筋示意圖 [27]