

Bangunan Depok *Sport Center* (DSC) merupakan bangunan yang menggunakan struktur baja *Portal Frame*. Dalam pembangunan bangunan dengan material baja, jumlah kebutuhan akan material tersebut sangat penting. Dengan menggunakan metode *Software Tekla Structures* perhitungan kebutuhan baja dapat dilakukan dengan detail. Serta mendapatkan laporan kebutuhan material secara cepat, otomatis, dan akurat.

Kebutuhan material dengan menggunakan *Software Tekla Structures* dimulai dengan menggambar atau memodelkan struktur rangka bangunan. Setelah itu *Tekla Structures* akan secara otomatis memberikan laporan kebutuhan material secara lengkap pada keseluruhan atau bagian model yang ingin diketahui.

Hasil dari perhitungan kebutuhan material baja pada bangunan Depok Sport Center (DSC) menggunakan *Software Tekla Structures* adalah kebutuhan rafter : profil H-250X125 sebanyak 11.050,3 kg; kebutuhan kolom : profil H-250X250 sebanyak 9.604,1 kg; kebutuhan reng : profil C-150X75 sebanyak 28.392 kg, L110 sebanyak 497,4 kg; kebutuhan pelat PLT10 sebanyak 137,3 kg, PLT15 sebanyak 148,3 kg, PLT16 sebanyak 234,2 kg, PLT20 sebanyak 463,5 kg, UB254 sebanyak 392 kg; kebutuhan baut 5/8 inci sebanyak 1.152 buah, baut 7/8''X50 sebanyak 144 buah, baut 7/8''X69 sebanyak 432 buah, dan kebutuhan las sepanjang 290.044 mm.

Kata kunci : *Tekla Structures*, Struktur Baja *Portal Frame*, Kebutuhan Material.

ABSTRACT

Depok Sport Center (DSC) building is a building that uses portal frame steel structure. In the construction of buildings with steel materials, the amount of need for such materials is very important. By using the Method of Software Tekla Structures calculation of steel needs can be done in detail. And get material needs reports quickly, automatically, and accurately.

Material needs by using Software Tekla Structures begins with drawing or modeling the skeletal structure of the building. After that Tekla Structures will automatically provide a complete material needs report on the whole or part of the model you want to know.

The result of the calculation of steel material needs in Depok Sport Center (DSC) building using Tekla Structures Software is rafter requirement: H-250X125 profile as much as 11,050.3 kg; column requirement: H-250X250 profile as much as 9,604.1 kg; reng needs: profile C-150X75 as much as 28,392 kg, L110 as much as 497.4 kg; plt10 plate needs as much as 137.3 kg, PLT15 as much as 148.3 kg, PLT16 as much as 234.2 kg, PLT20 as much as 463.5 kg, UB254 as much as 392 kg; bolt needs 5/8 inches as much as 1,152 pieces, bolts 7/8"X50 as much as 144 pieces, bolts 7/8"X69 as much as 432 pieces, and welding needs along 290,044 mm.

Keywords: Tekla Structures, Steel Structure Portal Frame, Material Needs.