

LineTypeMapping.xml and teklastructures.lin

LineTypeMapping.xml is the file Tekla Structures uses to convert the line types used in Tekla Structures drawings to line types that a user wishes to use in AutoCAD or AutoCAD compatible software. This xml file works in conjunction with another file called TeklaStructures.lin. This file actually defines the line types in AutoCAD. It is possible to manipulate both of these files to achieve a good drawing export to dwg format.

We will firstly describe the LineTypeMapping.xml file and then move on to describe the TeklaStructures.lin file. Following this we will explain how to implement both of these files when exporting drawings to dwg format.

The Line Mapping Xml File is made up of 3 sections
The first section is the header and consists of all of the code required in the file header. This code should not be altered.

```
<?xml version="1.1" encoding="UTF-8" standalone="yes"?>
<!DOCTYPE Mapper [
<ELEMENT Mapper (Mapping*)>
<!ATTLIST Mapper Version CDATA #REQUIRED>
<ELEMENT Mapping (From, To)>
<!ATTLIST Mapping LayerName CDATA #IMPLIED>
<ELEMENT From EMPTY>
<!ATTLIST From LineType CDATA #REQUIRED>
<ELEMENT To EMPTY>
<!ATTLIST To LineType CDATA #REQUIRED>
<!ATTLIST To LayerName CDATA #IMPLIED>
<!ATTLIST To Color CDATA #IMPLIED>
<!ATTLIST To Weight CDATA #IMPLIED>
]>
<Mapper Version="1.0">
```

The code that follows this is the actual line mapping code. Each line map command is made up of 5 lines. These lines are grouped together many of these groups can be stacked to make line mappings for several line types on several different layers.

```
<Mapping LayerName="Grid">
```

This line defines the existing Tekla Structures layer name*¹.

```
<From LineType="XKITLINE03"/>
```

This line defines the Tekla Structures line type*² (on that layer) that you want to map .

```
<To LineType="CENTER" LayerName="Grid" Color="BYLAYER"
Weight="BYLAYER"/>
```

This line defines the new line type (as defined in Teklastructures.lin), the new layer name (if required), AutoCAD colour and line weight.

```
</Mapping>
```

This is a footer for the above line mapping code.

TeklaStructures.lin is the file that we use to actually define line types in Autocad.

```
*BORDER,Border _____  
A, 3.175, -1.5875, 3.175, -1.5875, 0, -1.5875  
*BORDER2,Border (.5x) _____  
A, 1.5875, -0.79375, 1.5875, -0.79375, 0, -0.79375  
*BORDERX2,Border (2x) _____  
A, 6.35, -3.175, 6.35, -3.175, 0, -3.175
```

The above text defines line types in a format that Autocad can understand and import. Together with the LineTypeMapping.xml line types can be successfully exported to dwg format.

Both of these files can be edited in a text editor. By default both files are stored in C:\TeklaStructures\14.0\environments\australasia\system. It is however possible to store these files in a different location but you would have to edit this path in your advanced options. Unique versions of these files can be stored in your model folders so that they only work with individual models.

***1 - Existing Tekla Structures Layer Names are:**

Bolt – *Bolt Symbol*

Bolt Mark – *Bolt Mark Contents*

Component –

Component Mark -

Connection mark – *Connection Mark Text*

Dimension – *Dimension and dimension text*

Drawing Sheet – *Drawing sheet border*

Graphic Object – *Lines, hatches and boxes etc*

Grid – *Grid lines and marks*

Level Text – *Level mark & text*

Linked Object – *Object linked from another drawing?*

Mark – Objects like text that are not covered by any other 'mark' rule

Model Object

Neighbour Part Mark – *Neighbour part mark text and symbol*

Other Object Type – Objects that don't match any other rule

Part – *Part lines and neighbour part lines (6 line types are possible on this layer)*

Part Mark – *Part mark text and symbol*

Reference Model – *Reference model Lines and texts*

Reinforcing Mark – *Symbol and Text*

Reinforcing Bar – *Symbol lines and text*

Revision Text - *Text*

Section – *Section arrows and text*

Symbol Text – Objects like symbols inserted on the drawing.

Text – *Plain text*

Weld – *Weld symbol and text*

***2 – Tekla Structures Line types.**

Line type name	Line type appearance
XKITLINE00	————
XKITLINE01
XKITLINE02	----
XKITLINE03	----
XKITLINE04
XKITLINE05	-----
XKITLINE06	-----