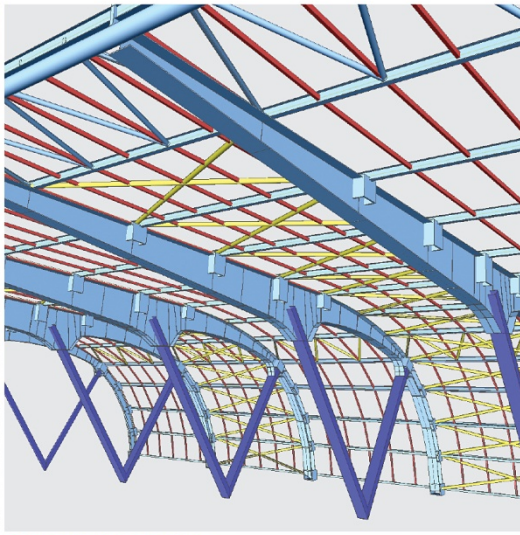
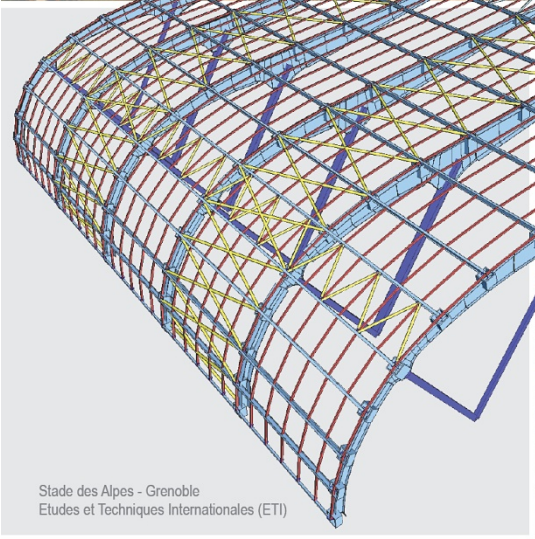
NEMETSCHEK Scia





Mapping Database Editor

Tutorial

Scia Engineer

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What is it?

Mapping Database Editor is a tool for definition of conversion tables for cross-sections and materials during an import and an export from and to other applications. The conversion table is saved in XML file format.
The reason of creation of this tool was the fact that not all other applications use the same name of cross-sections and materials, not all contain all of them and some allow you to name it with a user name. Then it is necessary to allow users to define a link with Scia Engineer database profile or material.
Each file with the conversion table has defined the application for which it should be used. The purpose of this tutorial is to introduce this tool and explain how to work with it.

Imports and exports which need the mapping tables

- Export to Tekla Structures

  Needs cross-section and material mapping tables
- Export to ETABS

  Needs only a cross-section table
- Import from ETABS

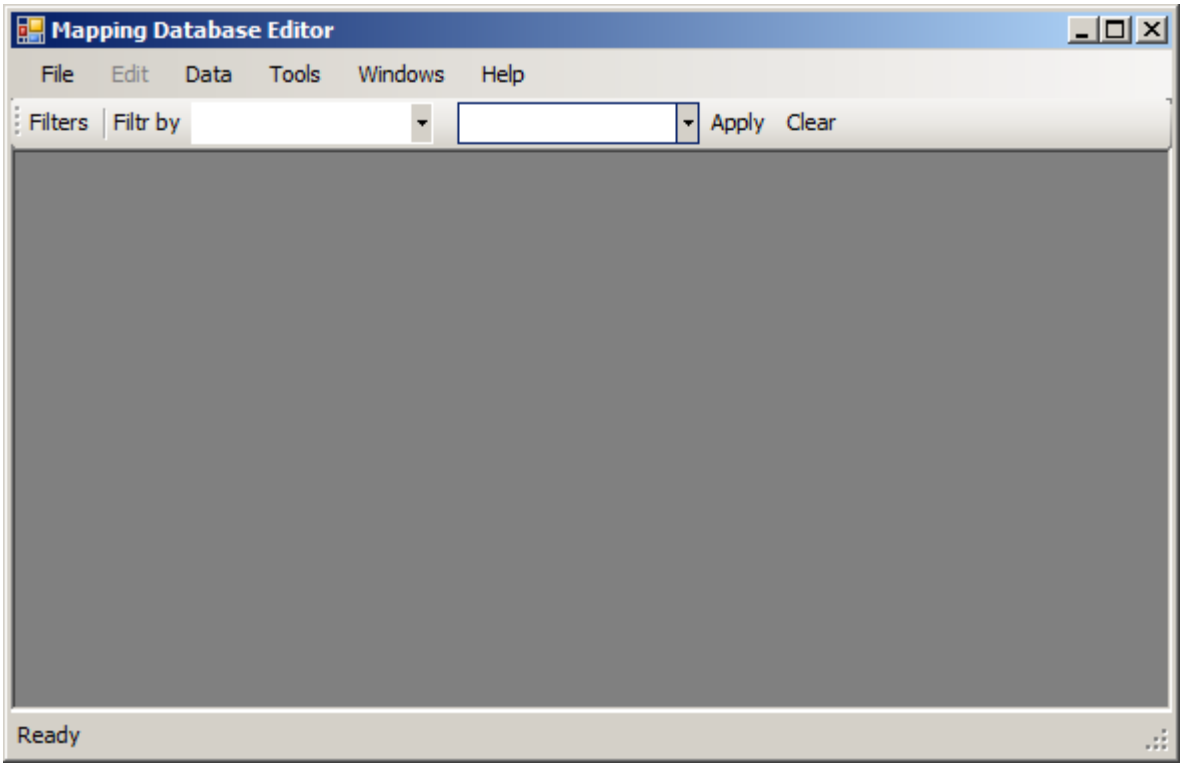
  Needs only a cross-section
- Import of SDNF file

  Needs cross-section and material mapping tables

Work with Editor

You can run the Editor from import and export dialogs or from menu Start. If you run it from the Start menu a basic window is opened. Otherwise a file with the defined mapping table is opened.

Basic window



File

New – creates a new empty file for database
Open – opens an Open dialog where you can select a file
Save – saves the file
Save as – saves the file under different name
Close – closes the opened file
Exit – closes the Editor

Data

Add - Material – adds a new line for a material definition
- Cross-section – adds a new line for a cross-section definition

Windows

- Shows all opened windows and allows you to switch between them.

Help

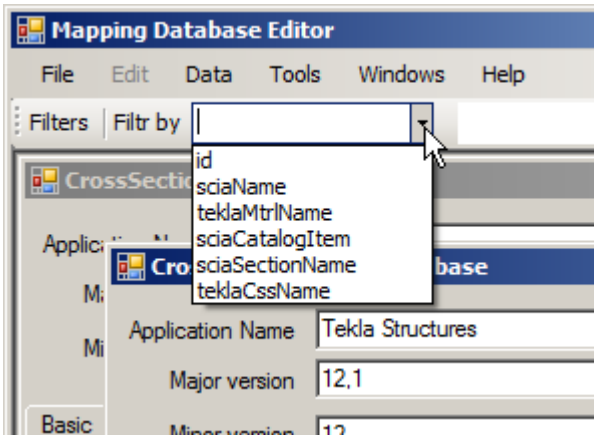
About – shows basic information about the tool

Filters

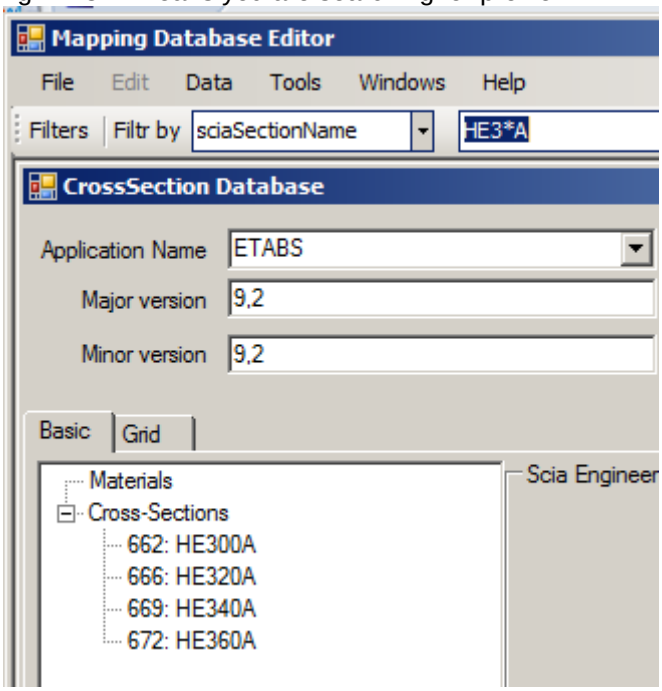
Toolbar Filters is very important. It allows you to find a defined profile(s) or material in the table. Available filters depend on the type of opened file, i.e. a table for material or profile, for which application, etc.
Common filter for all applications:

- Id
- sciaName
- sciaCatalogItem
- sciaSectionName

Other filters are by application.



In the first combo box you say which filter you want to use if any and in the second one you type what you are searching for. You can type the profile name or a part of profile name or a part of profile name with an asterisk.
E.g. HE3*A means you are searching for profile HEA which has at first position of number the digit 3.



If nothing changes in the tree, use button **[Apply]** on the filter toolbar. If you want to cancel the filter use button **[Clear]**.

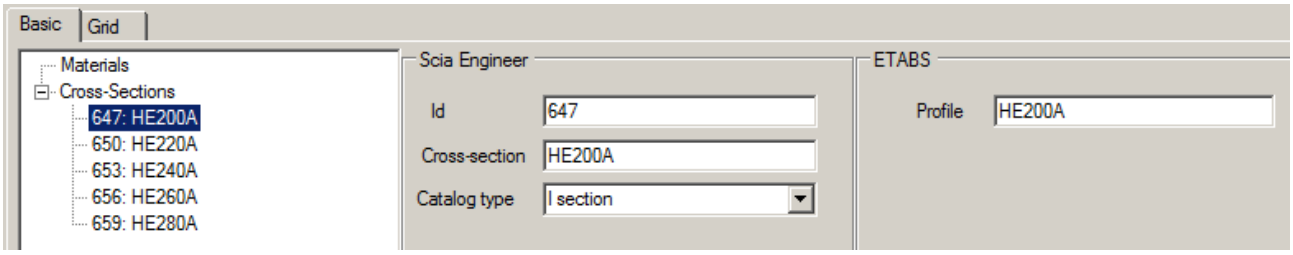
Database window

Fill in the information about the mapping file.
Application Name – selects Name of application for which the mapping database is being created
Major version – version of application
Minor version – version of application
Database Name – name of database
Version – version of database
Type – type Master – default one, User

Note: If you change the Application type, only the defined settings from Scia Engineer are preserved.

Basic tab

In the left side there is a window with a tree with defined profiles or materials. In the middle of the dialog there is all the information about the profile or material from Scia Engineer. In the right side there is the information/name about the profile from the other application.



Cross-section definition

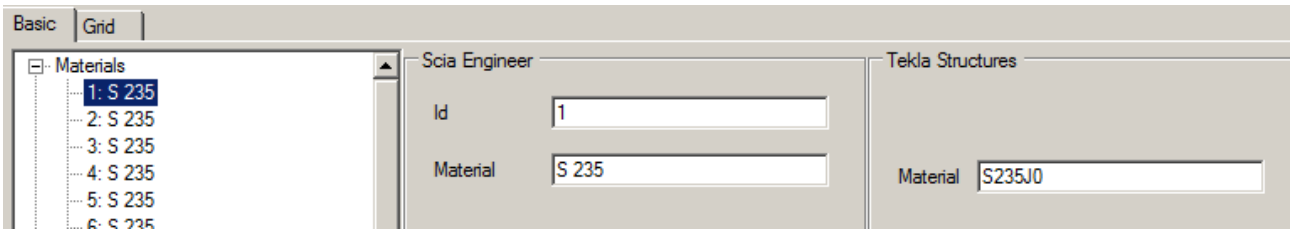
Scia Engineer
Id - is automatically generated after adding a new profile. If two or more items with the same Id exist, the one with the lower number has a priority.
Cross-section – the name is filled in by the user. The name must be from Scia Engineer database.
Catalogue type - must be defined.

Other application
Profile – name of cross-section is filled in by the user. It has to be in accordance with profile names of that application.

Material definition

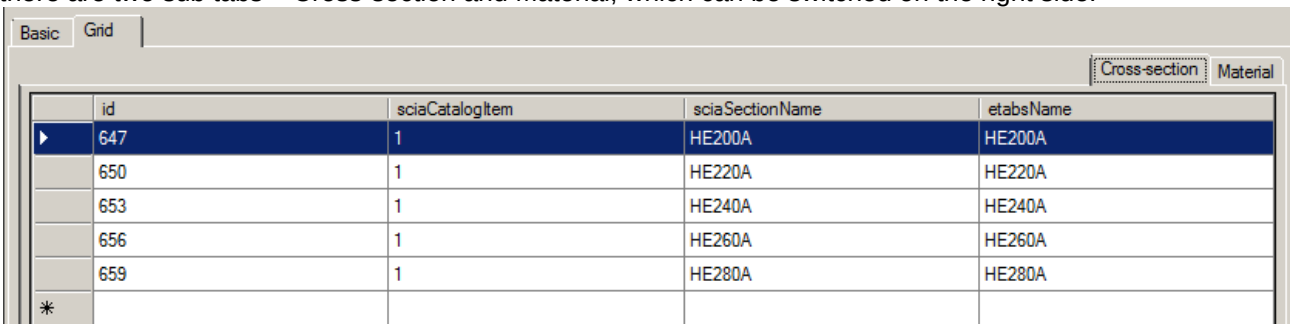
Scia Engineer
Id - is automatically generated after adding a new material. If two or more items with the same Id exist, the one with lower number has a priority.
Material – the name is filled in by the user. The name must be from Scia Engineer database.

Other application
Material – name of material is filled in by the user. It has to be in accordance with material names of that application.



Grid tab

It is another definition than in the Basic tab. Both types of definition can be mixed. On the Grid tab there are two sub tabs – Cross-section and Material, which can be switched on the right side.



	id	sciaCatalogItem	sciaSectionName	etabsName
▶	647	1	HE200A	HE200A
	650	1	HE220A	HE220A
	653	1	HE240A	HE240A
	656	1	HE260A	HE260A
	659	1	HE280A	HE280A
*				

It has the same items as the Basic tab only in a different arrangement. The Catalogue type is filled as a number where:
1 – I profile
2 – hollow section
3 – tube section
4 – L section
5 – channel section
6 – T section
7 – full rectangular section
11 – full circular section
101 – asymmetric I section
102 – rolled Z section
111 – cold formed angle section
150 – rail type KA section
1002 – minus L section

Note: Both cross-section and material mapping table can be defined in the same file.

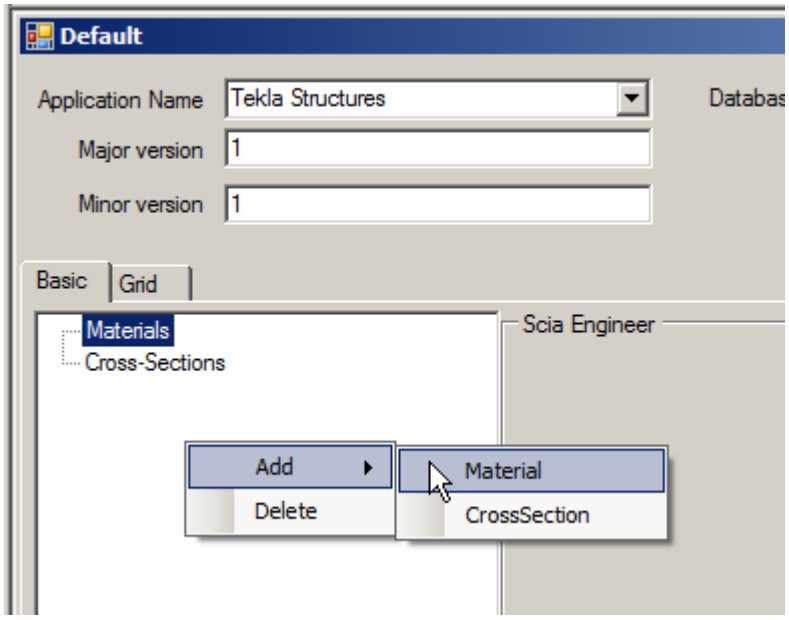
Examples of procedure

Define a new mapping table

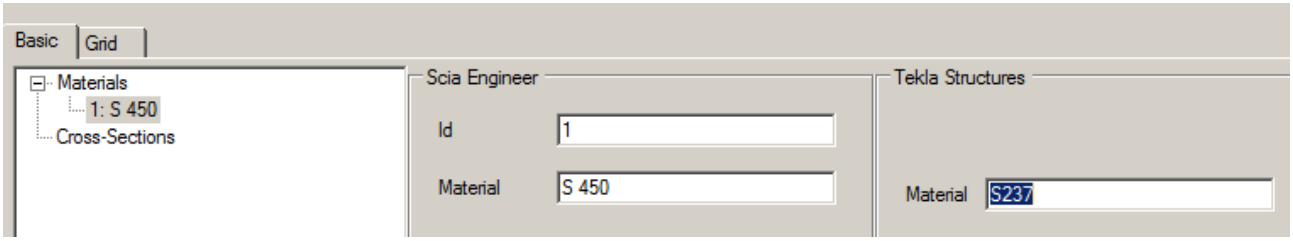
1. Launch the tool from **Start** > **Programs** > **Scia Engineer 2010.1** > **BIM tools** > **Mapping Database Editor**.
2. Run **File** > **New**.
3. Define **Application Name** – e.g. Tekla Structures. You can also fill in the other information about the file.
4. Add a material by means of

   – menu **Data** > **Add** > **Material**

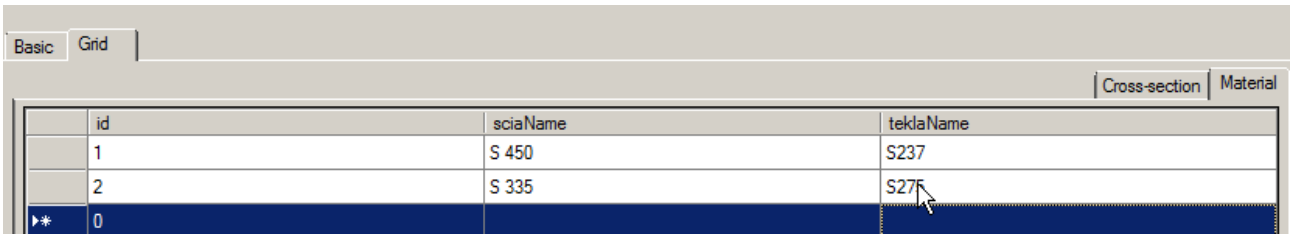
   – or a right mouse button click in the window in the left side of the dialogue. Then click on **Add** > **Material**.



5. Define Id (e.g. as 1), Material in Scia Engineer (e.g. as S 450) and Material in Tekla Structures (e.g. as S237).



6. Switch from Basic to Grid tab with Material subtab. You can see the first defined material.
7. Click into the second line and again define Id (e.g. as 2), sciaName material (e.g. as S 335) and teklaName material (e.g. as S275).

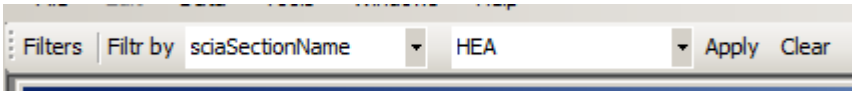


That means materials S 450 and S 335 from Scia Engineer will be substitute in Tekla Structures with S237 and S275.

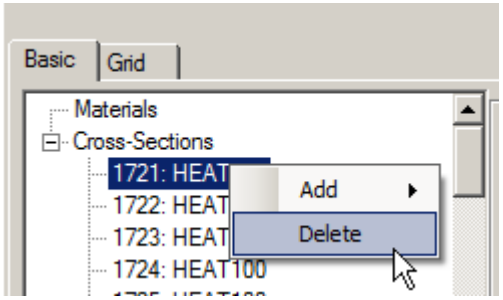
8. Save it with **File** > **Save as** and define a name of the table. You can try to export a simple structure from Scia Engineer with materials S450 and S335 and check up if it is correctly imported to Tekla Structures.

Edit an existing mapping table

1. Launch the tool from **Start** > **Programs** > **Scia Engineer 2010.1** > **BIM tools** > **Mapping Database Editor**.
2. Run **File** > **Open** and select e.g. SdnfCss.xml in Addons directory.
3. Set **Filter by** sciaSectionName and input a key – HEA.

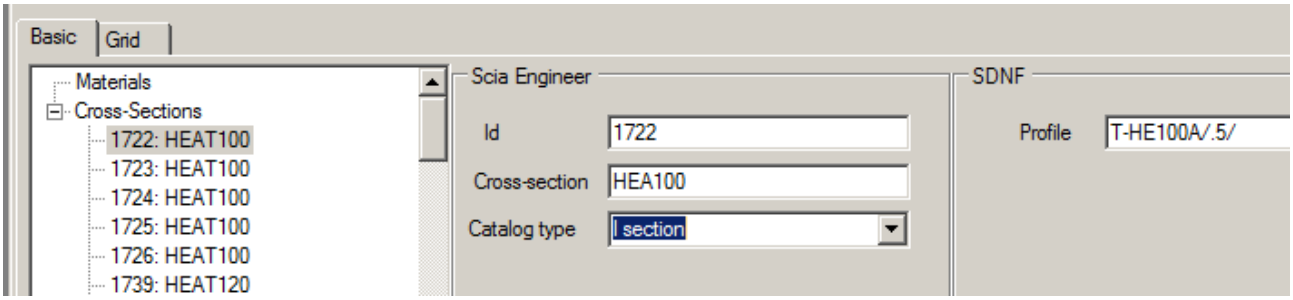


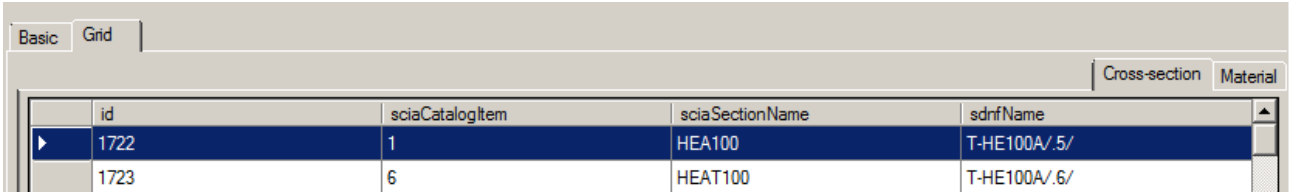
4. Select one of profiles in the left side window – e.g. id 1721 and remove it with a right mouse button click – **Delete**.



Or in the Grid tab using **Delete** key on your keyboard.

5. Select next one in either Basic or Grid tab and change the profile name in Scia Engineer column e.g. from HEAT100 to HEA100 and Catalogue type from T section to I section in the Basic tab or from 6 to 1 in the Grid tab. It means the T profile T-HE100A/.5/ from SDNF file will be imported to Scia Engineer as I profile HEA100.

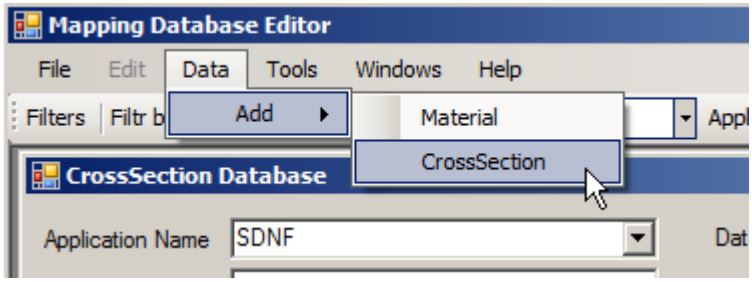




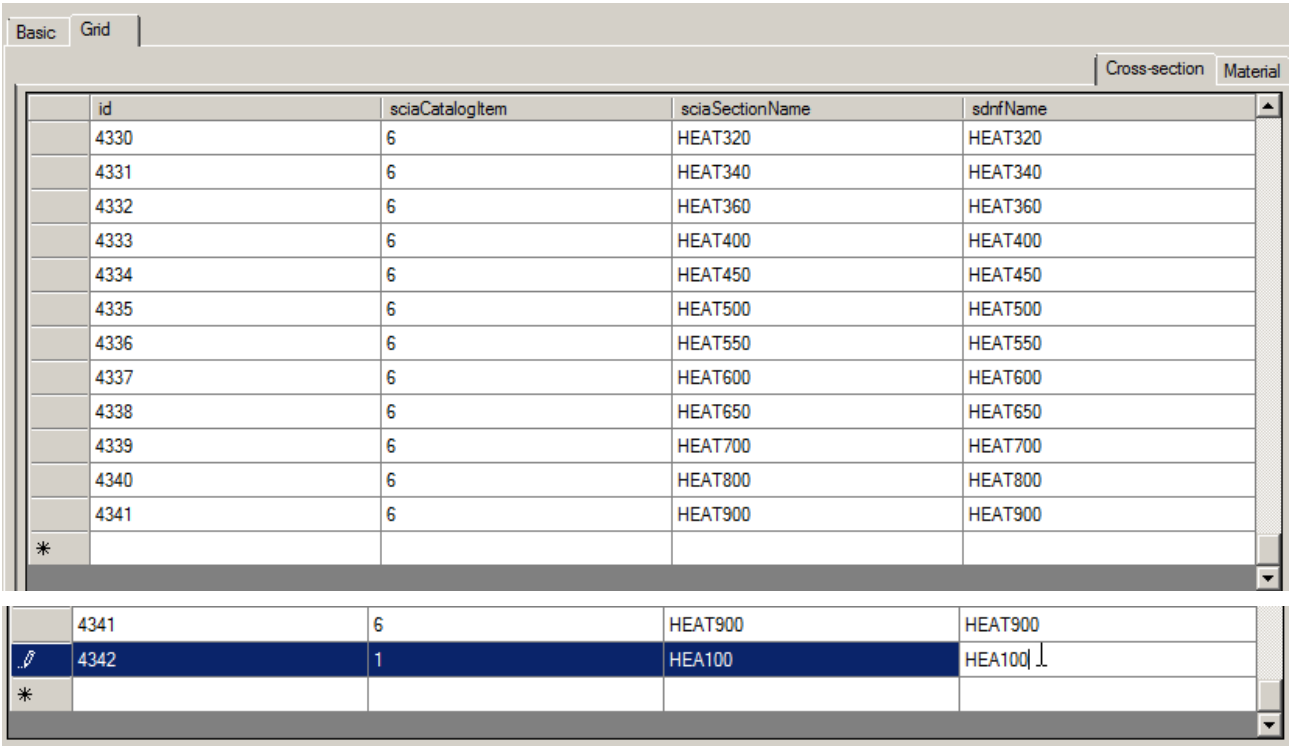
6. Add new one by means of

   - right mouse button click **Add** > **CrossSection**

   - or menu **Data** > **Add** > **CrossSection**



- or start to write in the last line in the Grid tab.



	id	sciaCatalogItem	sciaSectionName	sdnfName
	4330	6	HEAT320	HEAT320
	4331	6	HEAT340	HEAT340
	4332	6	HEAT360	HEAT360
	4333	6	HEAT400	HEAT400
	4334	6	HEAT450	HEAT450
	4335	6	HEAT500	HEAT500
	4336	6	HEAT550	HEAT550
	4337	6	HEAT600	HEAT600
	4338	6	HEAT650	HEAT650
	4339	6	HEAT700	HEAT700
	4340	6	HEAT800	HEAT800
	4341	6	HEAT900	HEAT900
*				

	4341	6	HEAT900	HEAT900
	4342	1	HEA100	HEA100
*				

7. After all changes save it using **File** > **Save** or **Save as**.