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## KISSsys function: Setup critical cross sections automatically

### 1 Introduction

#### 1.1 Functionality

Inside the KISSsoft shaft modules it is possible to automatically select “critical” cross sections for the calculation using sizing button. This automatic selection can be also operated from KISSsys and cross sections for all shafts can be automatically selected. Of course user needs to check the selected points also in this case.

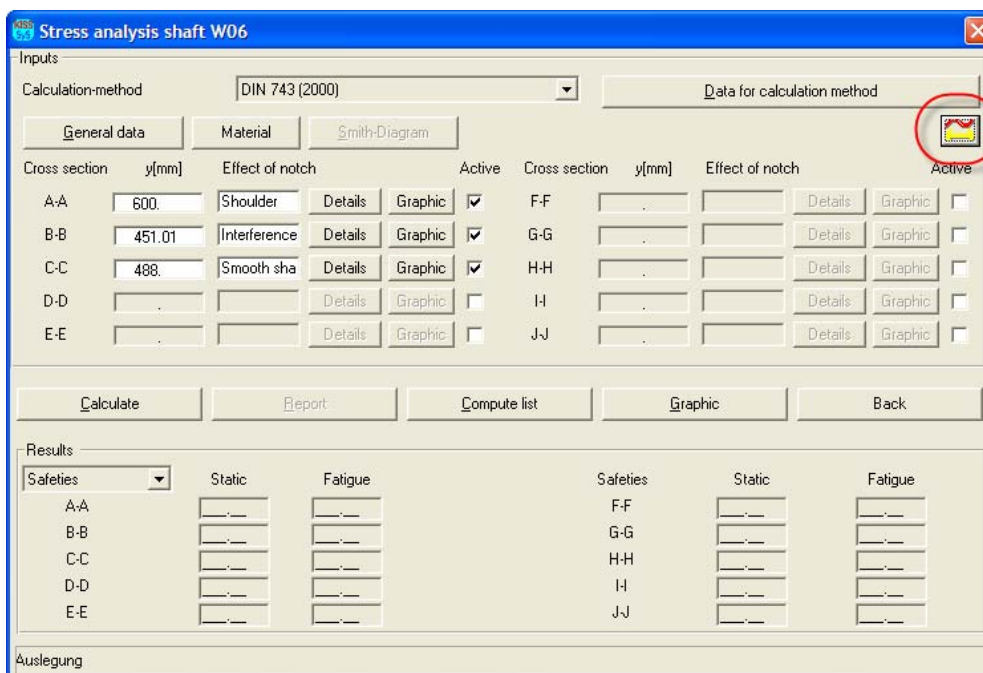


Figure 1.1-1 Call automatic sizing or selection for the critical cross sections

### 2 Function

#### 2.1 Course code

```

USES KISSsys.Consts;
VAR calcs,c,flag, table;

calcs = _O.OBJ_GetChildren(1,"kSoftShaft");

FORALL calcs c DO
  IF !c.OBJ_HasMember("W060") THEN
    c.OBJ_AppendMember("W060", 2, 1);
  ENDIF

```

Use constants defined in classes  
 Define local variables  
 Get al list of all shaft calculations  
 Go through the whole list  
 Create a new variable called “W060” for calling strength calculation if it doesn’t exist yet

KISSsys function: Shaft cross sections

<pre> c.W060 = 2; c.CADH_MemberSetFlags(c.OBJ_GetMember("W060"), 1+KSYS_IN+KSYS_OUT);  kSys_Recalc(c); c.StartModul(0); table = c.getTranslationTable(); kSoft_SetAllVars(c, table);  IF kSoft_Calculate("W050_Interface") AND kSoft_Calculate("W060_Reset") AND kSoft_Calculate("W060_Sizing") THEN flag = TRUE; ELSE flag = FALSE; ENDIF  kSoft_GetAllVars(c, table);  IF c.savingMode=3 THEN kSoft_SaveToBuffer(c.OBJ_GetName()+".internal_file"); ENDIF  NEXT </pre>	<p>Set value for this value to be 2 Toggle both flags (data transfer to the both directions)</p> <p>Recalculate current shaft Open the module in back ground Get all transferred variables in an array Set these variables in module according to the selections in KISSsys</p> <p>Open strength calculation, delete old cross sections and use sizing button to create new ones.</p> <p>If this was successful then set flag on</p> <p>Else remove flag</p> <p>Read all values back to KISSsys</p> <p>If file is saved to the KISSsys update all settings (new cross sections)</p>
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## 2.2 Where to find the course code?

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You are able to copy paste code from the referenced txt file.

In similar manner any of the existing variables can be expressed. User can extend the functionality by own variables.