KISSsoft AG - +41 55 254 20 50
Uetzikon 4 - +41 55 254 20 51
8634 Hombrechtikon - info@KISSsoft.AG
Switzerland - www.KISSsoft.AG

KISSsys function:

Setting expressions automatically for components of same type

1 Introduction

1.1 Functionality

When a model has lot of similar calculations or same type of components, where user needs to add the same expressions or link from some other place, it doesn't make sense to do that manually for every place. This can be for example used in putting global settings for the calculations.
Usually all calculation are sharing the same global parameters or settings like oil type, temperature, lifetime requirement, calculation method… These values can be defined e.g. in "Settings" –table to be easily adjusted. When values are created in table, there must be links created to every place where these values are preferred to use. This can be done manually settings expression for each component and variable. This is not efficient way and you can easily do a typing mistake or forgot to set one of the expressions.
This function is normally not to be used several times, but only once when model is created. Functionality can be deleted after first use or it can be hidden from normal user not to be seen to protect unnecessary use.

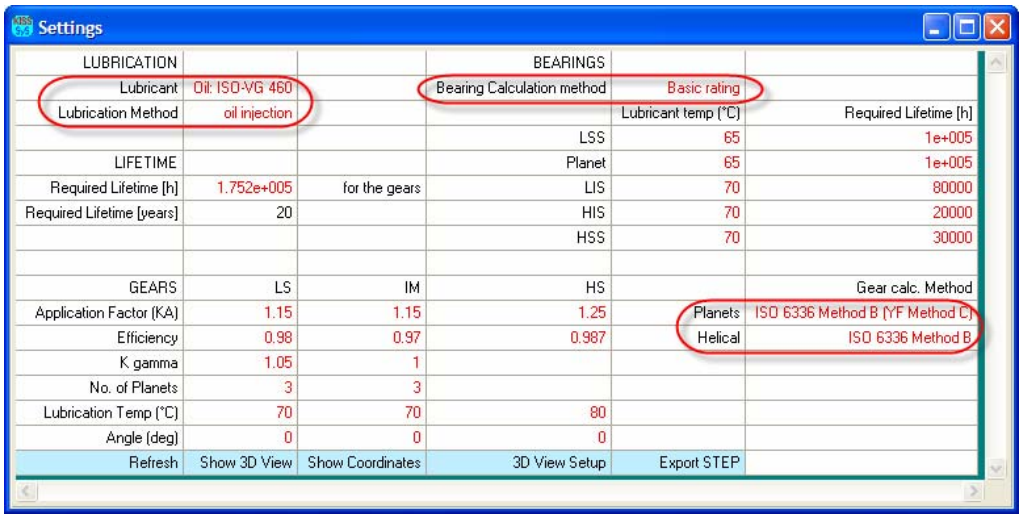

Figure 1.1-1 Common settings for all calculations

Explanations how to introduce values in the table can be found from the file "ins-004-02-UserInterface-edition.pdf"

1.2 "SetData"

In this example the function is called "SetData" and it is located under "Settings"- table.

Function will set expression automatically for the selected variables of different calculations.

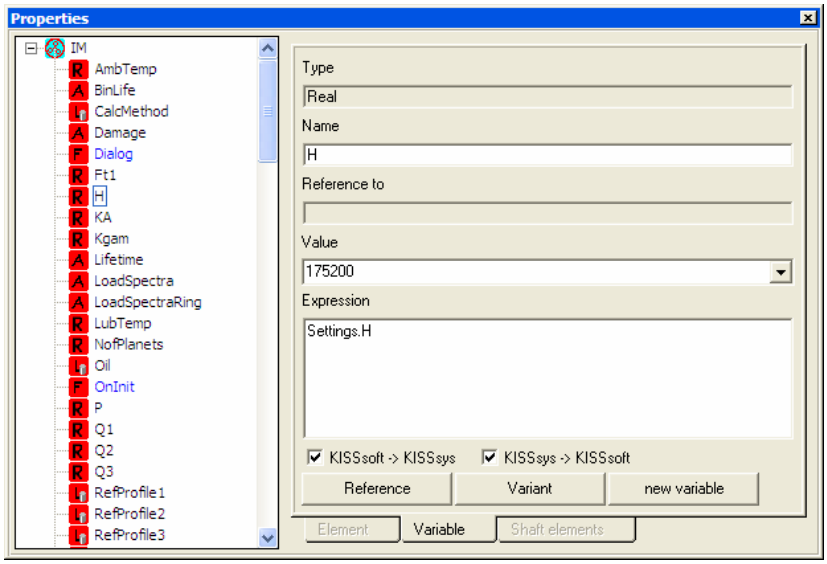

Figure 1.2-1 Expression created for the required lifetime

2 Function

2.1 Course code

VAR tables,t;	Define local variables
tables=_O.OBJ_GetChildren(1,"kSoftHelicalGearPair"); //Get list of gear calculations	Get list of all helical gear calculations (list of Ids)

FORALL tables t DO //repeat following lines for every gear calculation
t.OBJ_SetMemberExpr("CalcMethod","Settings.HelicalCalcMethod");
t.OBJ_SetMemberExpr("Oil","Settings.Oil");
t.OBJ_SetMemberExpr("TypeOfLub","Settings.TypeOfLub");
t.OBJ_SetMemberExpr("H","Settings.H");
NEXT
	Go through the whole list one by one
	CompoentName.OBJ_SetMemberExpr("variable","expression")
	OBJ_SetMemberExpr() function will set expression to the defined variable. t = ComponentName (calculation Id) from the list
	Expression set to 4 variables all defined in the "Settings" table

tables=_O.OBJ_GetChildren(1,"kSoftPlanetGearSet"); //Get list of bevel gear calculations	Planetary calculations

FORALL tables t DO //repeat following lines for every gear calculation
t.OBJ_SetMemberExpr("CalcMethod","Settings.PlanetCalcMethod");
t.OBJ_SetMemberExpr("Oil","Settings.Oil");
t.OBJ_SetMemberExpr("TypeOfLub","Settings.TypeOfLub");
t.OBJ_SetMemberExpr("H","Settings.H");
NEXT
	Do the same as for helical gears

tables=_O.OBJ_GetChildren(1,"kSoftBearing"); //Get list of bearing calculations	And also for the bearings

FORALL tables t DO //repeat following lines for every gear calculation
t.OBJ_SetMemberExpr("enhanceLifeCalc","Settings.enhanceLifeCalc");
t.OBJ_SetMemberExpr("Oil","Settings.Oil");
NEXT	

2.2 Where to find the course code?

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.