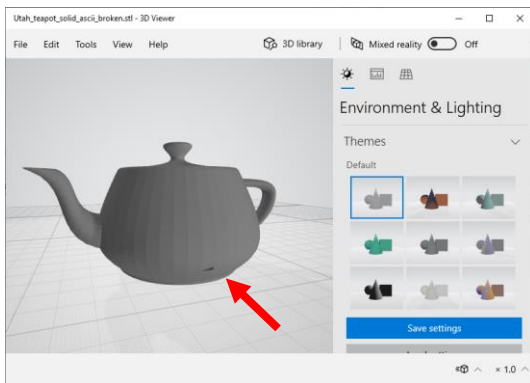


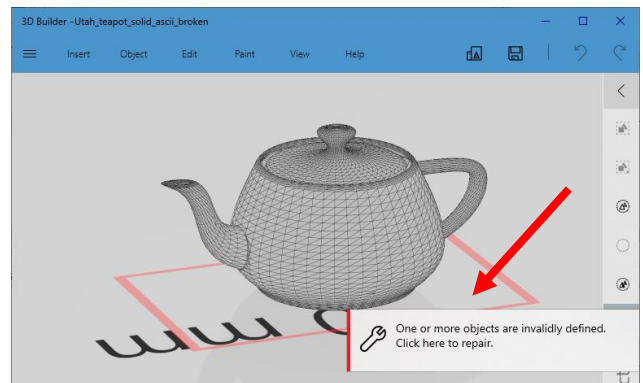
Introduction

For optimal use in SOLIDO the triangles defining the object in the STL-file should create a “watertight” surface. When the STL file is missing triangles in its surface, problems may occur when using the files as input in SOLIDO.

This problem is illustrated with the ‘Utah teapot STL’ file in which on purpose 1 triangle is removed (by opening the ASCII version of this STL file with a text editor).



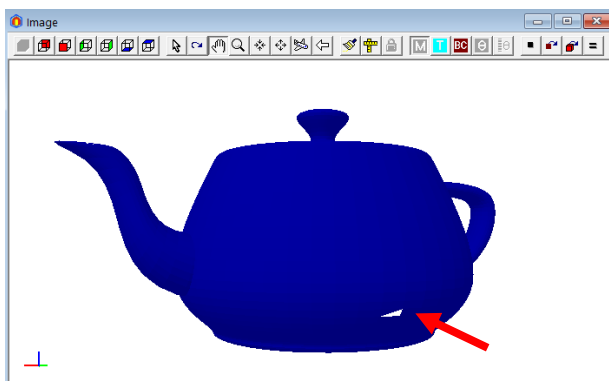
Model in Microsoft 3D viewer with indication of missing triangle



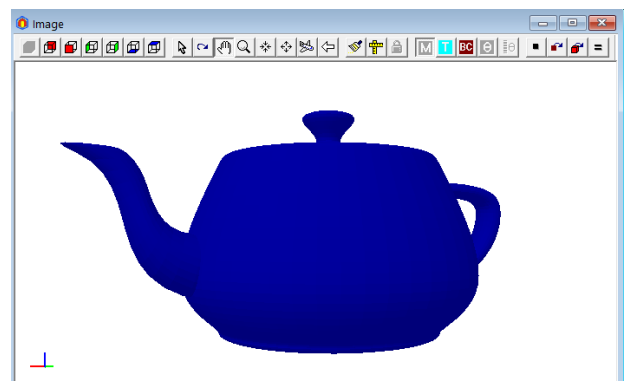
Model in Microsoft 3D builder with indication of invalidly definition

Solution

Most 3D SOLID modelling software tools can detect such errors and fix them. The example above is fixed with Microsoft 3D builder. When loading the STL in Microsoft 3D builder an automatic warning will appear if the STL’s surface is not watertight. By clicking on this message the STL will be fixed.



Triangulated object of broken STL file in



Triangulated object of fixed STL file