Sub InsertDrainNozzlesIntoAssembly()

' This code places the drain nozzles into our assembly, if applicable

' Each drain nozzle consists of a pipe, and an end connection (i.e. flange, capped flange, or valve)

' One drain nozzle can be placed on the front head dish plate, and another can be placed on the rear head dish plate

' First, we set the size of the drain nozzles based on the OD of the tank

If TANK\_OD <= 48 in Then

DRAIN\_SIZE = 3 in

Else

DRAIN\_SIZE = 4 in

End If

' If they have selected to have a drain in front, then place it at the bottom of the tank on the front dish head plate

Dim strDrainValveName, strDrainPipeName As String

' These strings represent the filenames (and paths) for the both the pipe and the end connection

strDrainValveName = LIBRARY\_PATH & "Valves\Butterfly\" & DRAIN\_SIZE & " Inch\Slip-On Welding to Threaded Valve - " & DRAIN\_SIZE & ".iam"

strDrainPipeName = LIBRARY\_PATH & "Flanges\ANSI B36.10 XS - " & DRAIN\_SIZE & ".ipt"

' This variable will represent the offset in the front based on the end connection type

Dim dblFrontHorOffset As Double

If DRAIN\_F\_FL\_END = "Valve" Then

dblFrontHorOffset = 12

Else

dblFrontHorOffset = 9

End If

' This variable will represent the offset in the rear based on the end connection type

Dim dblRearHorOffset As Double

If DRAIN\_F\_FL\_END = "Valve" Then

dblRearHorOffset = 12

Else

dblRearHorOffset = 9

End If

' This code will determine if a front drain is required, and then run code to place it if it is

If DRAIN\_F Then

' This uses the "GetFlangeFilename" function (near the bottom of this rule)

' It will automatically determine the filename based on flange type, flange end connection, and drain size

Dim strFrontDrainFlangeName = GetFlangeFilename(DRAIN\_F\_FL\_TYPE, DRAIN\_F\_FL\_END, DRAIN\_SIZE)

' This uses the "GetFrontOrRearMatrix" function (near the bottom of this rule)

' This will automatically determine the location matrix based on several factors

Dim matrixI = GetFrontOrRearMatrix(DRAIN\_F\_FL\_TYPE, DRAIN\_F\_FL\_END, DRAIN\_SIZE, dblFrontHorOffset, DRAIN\_SIZE, "Front", "Bottom")

' This can be taken from an iLogic snippet, and is used to insert components into assemblies

' This code inserts the selected end connection part or assembly into our master tank assembly file

' Instead of placing at the origin, it places it based on our input matrix we created (matrixI)

' Note that we are grounding all geometry, and we are not using any constraints to place the end connection

Dim componentI = Components.Add("Front Drain:1", strFrontDrainFlangeName, position := matrixI, grounded := True, visible := True, appearance := Nothing)

' We create a location matrix and place the pipe, to complete the components needed for the front drain

Dim matrixJ = ThisDoc.Geometry.Matrix(-1, 0, 0, 0, 0, 1, 0, -TANK\_OD / 2 + DRAIN\_SIZE, 0, 0, -1, TANK\_L / 2 + (DRAIN\_SIZE / (TANK\_OD / 2)) \* DISH\_DEPTH + 9 in, 0, 0, 0, 1)

Dim componentJ = Components.Add("Front Drain Pipe:1", strDrainPipeName, position := matrixJ, grounded := True, visible := True, appearance := Nothing)

End If

' This code will determine if a rear drain is required, and then run code to place it if it is

If DRAIN\_R Then

' This uses the "GetFlangeFilename" function (near the bottom of this rule)

' It will automatically determine the filename based on flange type, flange end connection, and drain size

Dim strRearDrainFlangeName = GetFlangeFilename(DRAIN\_R\_FL\_TYPE, DRAIN\_R\_FL\_END, DRAIN\_SIZE)

' This uses the "GetFrontOrRearMatrix" function (near the bottom of this rule)

' This will automatically determine the location matrix based on several factors

Dim matrixK = GetFrontOrRearMatrix(DRAIN\_R\_FL\_TYPE, DRAIN\_R\_FL\_END, DRAIN\_SIZE, dblRearHorOffset, DRAIN\_SIZE, "Rear", "Bottom")

' This can be taken from an iLogic snippet, and is used to insert components into assemblies

' This code inserts the selected end connection part or assembly into our master tank assembly file

' Instead of placing at the origin, it places it based on our input matrix we created (matrixK)

' Note that we are grounding all geometry, and we are not using any constraints to place the end connection

Dim componentK = Components.Add("Rear Drain:1", strRearDrainFlangeName, position := matrixK, grounded := True, visible := True, appearance := Nothing)

' We create a location point and place the pipe, to complete the components needed for the rear drain

Dim pointL = ThisDoc.Geometry.Point(0, -TANK\_OD / 2 + DRAIN\_SIZE, -(TANK\_L / 2 + (DRAIN\_SIZE / (TANK\_OD / 2)) \* DISH\_DEPTH + 9 in))

Dim componentL = Components.Add("Rear Drain Pipe:1", strDrainPipeName, position := pointL, grounded := True, visible := True, appearance := Nothing)

End If

End Sub