

Appendix A3- Set-up Input XML file for GL Rankine Solver

A3.1- Sample XML file for Steady Flow Computation

```
<GLRankine>
<Project version="1.0">
<Configuration>
  <ProjectInfo>
    <Generator>
      <Name value="created by Tin"/>
      <Version value="1.0"/>
    </Generator>
    <CreationTime timeStamp=""/>
    <CreatedBy name="Tin"/>
    <ProjectName value="DTC"/>
  </ProjectInfo>
</Configuration>
<Computations>

<Preprocessing>
  <Bodies>
    <Body>
      <BodyDefinition name="dtc" sym="1">
        <BodyParts>
          <BodyPart name="part">
            <Surface>
              <ReadFromFile type="stl" fileName="DTC.stl"/>

            <Transformations>

            <Translation dx="0" dy="0" dz="-14.5" />

          </Transformations>
          <!-- <LimitPlane nx="0" ny="1" nz="0" d="0" /> -->

          <WriteToFile type="vtk" fileName="surf.vtk" />
        </Surface>

      </Body>

    </Bodies>

    <BodyPanelGeneration>
      <double name="lMid" value="3.5"/>
      <double name="lBow" value="2.5"/>
      <double name="lAft" value="2.5"/>
      <double name="zBow" value="1.62008"/>
      <double name="zAft" value="0.972048"/>
    </BodyPanelGeneration>

  </BodyPart>
</BodyParts>
<Transformations>
</Transformations>
  <WriteToFile type="vtk" fileName="panels.vtk"/>
  <WriteToFile type="shr2" fileName="body-def2.shr2"/>
</Computations>
```

```
</BodyDefinition>
</Body>
</Bodies>

<FreeSurface>
    <SetDefaultParameterFor u0="7.9732" />
<FreeSurfaceDefinition>
<RectangularFreeSurface>
</RectangularFreeSurface>
    <WriteToFile type="vtk" fileName="fs.vtk" />
</FreeSurfaceDefinition>
</FreeSurface>
</Preprocessing>
<NonlinearSteadySimulation>
    <Data>
        <BodyData bodyName="dte">
            <double name="cogZ" value="8.46951" />
        </BodyData>
    </Data>
<Parameter>
    <double name="u0" value="7.9732" />
    <double name="rho" value="1025" />
    <double name="g" value="9.81" />
    <double name="relax" value="0.3" />
    <double name="relax0" value="1" />
    <double name="wdp" value="0.001" />
    <unsignedInt name="maxIter" value="100" />
</Parameter>
<Output>
<ResultFile>dump.shr2</ResultFile>
<LogFile>log.out</LogFile>
<VTKDirectory>data</VTKDirectory>
</Output>
</NonlinearSteadySimulation>
</Computations>
</Configuration>
</Project>
</GLRankine>
```