CHECK LIST
SPECIAL DESIGN

EXPANSION JOINT/-S
☐ Nominal diameter
☐ Built-in length
☐ Design and operating pressure (BarG)
☐ Design and operating temperature (°C)
☐ Medium
  - Inside / outside / toxic / gasous / liquid / flammable / corrosive
  - Fluid density
  - Concentration
  - Condensates
  - Flow velocity and rate
  - Flow pulsation
☐ Installation position (horizontal / vertical)
☐ Movements (axial / lateral / angular / vibrations)
☐ Spring rates
☐ Bellow
  - Material
  - No. of convolutions
  - Single ply / multiply / 2-ply testable bellows
☐ Connection inlet and outlet end
  - Flange (standard/special, OD, ID, PCD, holes, material of flange, raised face dim)
  - Pipe ends (diameter of pipe, thickness of pipe, length of pipe, material of pipe)
☐ Inner sleeve (diameter, material)
☐ Protective outer cover (outside diameter, thickness, material)
☐ Tie rods (material, only for transportation, acting as movement limiters)
☐ Design code (EJMA / PED / ASME VIII / ASME B.31.3 / AD-B13 / other)
☐ Cyclic design life
☐ Load case
☐ Allowable loads on nozzles (connection ends of pressure vessels / turbines / pumps)
☐ External loads (wind pressure / earthquake / snow load / moments and forces from own weight)
☐ Piping layout - isometry
☐ Bounding Box (maximum allowable dimensions of the sitting of expansion joints)

QUALITY ASSURANCE
☐ Quality control in accordance with PED
☐ 3.1 full traceability / 2.2 certificate
☐ Control and tests
  - Dimensional and visual control
  - Tightness test
  - Pressure test
  - Penetrant test
  - X-Ray
  - Ultrasonic test
  - Other/any 3. party surveillance
☐ WPS required