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Ref: 9900-I-M3FS21

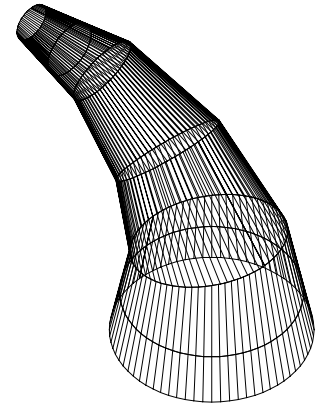
# FastSHAPES® - PENSTOCK 32Bit

## TYPICAL APPLICATIONS

Hydro-electric penstocks, distributor pipework  
Generalized tubes and bends, circular cross-sections

## TECHNICAL DESCRIPTION

Setout by method of common central spheres  
Radial line development method  
Weld preparations included in developments  
Up to 100 consecutive cones per penstock  
Optional intermediate circ. joint per cone, with thickness change at joint.  
Up to 4 segments per half or full cone  
Match marking provided  
Rolling guides marked.  
Green provided for.

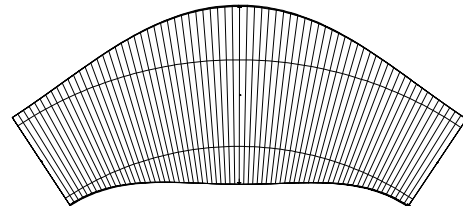


## DATA REQUIREMENTS

Centre coordinates and internal diameter of spheres  
Optional intermediate circ. joint plane data  
Material, Thickness of each half or full cone  
Segment angles for each half or full cone  
Green for each circ. joint, Green for longitudinal joint  
Joint Weld details

## OUTPUT

Patterns in any of the following forms ...  
FastCAM file  
2D DXF file, 3D DXF File  
NC Program  
Coordinate Table  
A list of plate sizes and rolling radius data



## PROGRAM REFERENCE

M3FS21 : PENSTOCK

## OTHER REFERENCES

M3FS12 : ELBOW (Constant circular cross-section bends)  
M3FS13 : LOBSTER (Reducing circular cross-section bends)  
M3FS18 : BIFURC8PLUS (General conical bifurcation, with stiffeners)

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