

## **VESSEL CONNECTIONS**

Manholes reinforcing plates, nozzles or other connections should be examined for cracks, deformation or other defects.

Bolts and nuts should be checked for corrosion or defects.

Tell-tale holes in reinforcing plates shall remain open to provide visual evidence of leakage as well as to prevent pressure build up between the vessel and reinforcing plate.

Accessible flange faces shall be examined for distortion and to determine the condition of gasket-seating surfaces.

## **CUTS OR GOUGES**

Cuts or gouges can cause high stress concentrations and decrease the wall thickness.

depending upon the extent of the defect, it may be necessary to repair the area by welding or patching.

Surface inspection: the surface of shell and heads shall be examined for possible cracks, blisters, bulges and other evidence of deterioration, giving particular attention to the skirt and to support attachment and knuckle regions of the heads.

## **WELD JOINTS**

Welded joints and the adjacent heat affected zones shall be examined for cracks or other defects.

Superficial NON DESTRUCTIVE EXAMINATIONS is recommended.

## **5.2 INTERNAL INSPECTION**

The following activities shall be performed to support the inspection:

- inspection plugs and covers shall be removed
- vessel shall be sufficiently cleaned to allow the visual inspection of internal and external surfaces
- vessel shall be reclaimed, and internal atmosphere shall be tested to check the presence of dangerous and lethal gases

A general visual inspection is the first step in making an internal inspection.

All parts of the vessel shall be inspected for corrosion, erosion, blistering, deformation, cracking and laminations.

In particular:

## **VESSEL CONNECTIONS**

Threaded connections shall be inspected to ensure that an adequate number of threads are engaged.

All openings leading to any external fittings or controls shall be examined as thoroughly as possible to ensure they are free from obstructions.

## **VESSEL CLOSURES**

Any closures, which are used frequently in the operation of a pressure vessel, shall be checked by the Inspector for adequacy and wear.

A check shall also be made for cracks at areas of high stress concentration.