Risk based Inspection (or RBI) is a risk-based approach to inspection in the Oil and Gas industries. This type of inspection analyzes the likelihood of failure and the consequences of the same, often in industrial pipework.

It is used to prioritise inspection, usually by the means of non destructive testing, requirements for major oil refineries and chemical installations around the world.

Items with high probability and high consequence are given a higher priority for inspection than items that are high probability but for which failure has low consequences. This strategy allows for a rational investment of inspection resources.

RBI will assist a company to select cost effective and appropriate maintenance and inspection tasks and techniques, to optimize such efforts and cost, to shift from a reactive to a proactive maintenance regime, to produce an auditable system and to give an agreed “Operating window”.

The purposes of RBI include:
1. To move away from time based inspection governed by minimum compliance with rules, regulations and standards for inspection.
2. To apply a strategy of doing what is needed for safeguarding integrity and improving reliability and availability of the unit by planning and executing those inspections that are needed.
3. To provide economic benefits such as fewer inspections, shorter shutdowns, longer run length, and less frequent shutdowns.
4. To safeguard integrity.

The purposes of RBI include:
1. To move away from time based inspection governed by minimum compliance with rules, regulations and standards for inspection.
2. To apply a strategy of doing what is needed for safeguarding integrity and improving reliability and availability of the unit by planning and executing those inspections that are needed.
3. To provide economic benefits such as fewer inspections, shorter shutdowns, longer run length, and less frequent shutdowns.
4. To safeguard integrity.

The purposes of RBI include:
1. To move away from time based inspection governed by minimum compliance with rules, regulations and standards for inspection.
2. To apply a strategy of doing what is needed for safeguarding integrity and improving reliability and availability of the unit by planning and executing those inspections that are needed.
3. To provide economic benefits such as fewer inspections, shorter shutdowns, longer run length, and less frequent shutdowns.
4. To safeguard integrity.