



AMERICAN PETROLEUM INSTITUTE

API Recommended Practice 580

Risk-based Inspection

THIRD EDITION | FEBRUARY 2016 | 94 PAGES | \$265.00 | PRODUCT NO. C58003

The purpose of this document is to provide users with the basic minimum and recommended elements for developing, implementing, and maintaining a risk-based inspection (RBI) program. It also provides guidance to owner-users, operators, and designers of pressure-containing equipment for developing and implementing an inspection program.

These guidelines include means for assessing an inspection program and its plan. The approach emphasizes safe and reliable operation through risk-prioritized inspection. A spectrum of complementary risk analysis approaches (qualitative through fully quantitative) can be considered as part of the inspection planning process.

RBI guideline issues covered include an introduction to the concepts and principles of RBI for risk management; and individual sections that describe the steps in applying these principles within the framework of the RBI process, including:

- a) understanding the design premise;
- b) planning the RBI assessment;
- c) data and information collection;
- d) identifying damage mechanisms and failure modes;
- e) assessing probability of failure (POF);
- f) assessing consequence of failure (COF);
- g) risk determination, assessment, and management;
- h) risk management with inspection activities and process control;
- i) other risk mitigation activities;
- j) reassessment and updating;
- k) roles, responsibilities, training, and qualifications;
- l) documentation and recordkeeping.

For ordering information:

Online: www.api.org/pubs

Phone: 1-800-854-7179
(Toll-free in the U.S. and Canada)

(+1) 303-397-7056
(Local and International)

Fax: (+1) 303-397-2740

API members receive a 30% discount where applicable.