



# SOFTWARE

E<sup>2</sup>G software is authored and developed by our experts, many of whom serve as leaders in industry committees (API/ASME 579, API 581, API 520, ASME B31.3) and are focused on continually improving the software with the latest committee-approved changes, often before they have been published.

**DESKTOP  
SOFTWARE**

**BUILT BY  
EXPERTS**



## API RBI SOFTWARE

Many companies provide Risk-Based Inspection (RBI) software. Most claim to be compliant with API Recommended Practice (RP) 580; a few claim to comply with API RP 581. E<sup>2</sup>G's software is the only API-branded RBI software product because we are committed to fully supporting the RBI technology as documented in API RP 581.

## SOFTWARE INTEGRATION WITH PCMS

A fully embedded API RBI module for calculating risk according to API RP 581 is now available within PCMS. The embedded solution utilizes the same calculator used in PlantManager™ API RBI, the official API-branded software for risk-based inspection. Risk is calculated at the circuit level in PCMS and utilizes data already entered in PCMS for the 581 quantitative calculation with minimal additional data requirements. Once risk is calculated for the circuit, an inspection recommendation is produced. Events recorded based on API RBI inspection recommendations can be graded in a PCMS event. Graded inspections will be incorporated in subsequent RBI calculations.

## PlantManager™ SOFTWARE

API RBI and SagePlus™ are delivered in E<sup>2</sup>G's PlantManager™ platform. Capable of running locally on the desktop or in enterprise client-server configuration, the four-tier architecture of PlantManager™ provides a scalable, flexible solution to connect unlimited servers, databases, calculators, and clients. The platform supports integration with 3rd-party software such as PCMS, Meridium APM, SAP, Maximo, Crystal Reports, MS SQL Server Reporting Services, etc. PlantManager™ is designed to natively manage all equipment types defined in API RP 581. A basic data set of design and operating conditions is available for each equipment and component and can be shared between PlantManager™ analysis applications.

## SagePlus™ SOFTWARE

SagePlus™ was created in 2002 by our own industry-leading engineers to support our consulting practice. The program continuously evolves based on the latest committee-approved changes. This often occurs before a formal publication of updates, as our experts serve as leaders on industry committees (API/ASME 579, API 520, ASME B31.3, and other relevant codes and standards committees).

SagePlus™ is a collection of analysis tools developed by E<sup>2</sup>G that runs in the PlantManager™ platform, allowing users to evaluate the design and in-service conditions of fixed pressure equipment. The software is organized in a series of packages targeting specific types of analysis functions.

## DamagePlus™ SOFTWARE

E<sup>2</sup>G's DamagePlus™ software has been updated to the newest edition of API RP 571, *Damage Mechanisms Affecting Fixed Equipment in the Refining Industry, 2nd Edition, April 2011*.

SMART TECHNOLOGY.

# THE EQUITY ENGINEERING CLOUD PLATFORM

At the beginning of 2017, E<sup>2</sup>G launched the **eec** platform. Throughout the remainder of 2017, the **eec** platform underwent a substantial development cycle based on feedback received from both internal and external users. During this year of development, the **eec** went from hosting two WebTools (one for assessing High-Temperature Hydrogen Attack and the other for Hot Tap Welding simulations), to now hosting over 40 WebTools that perform everything from standard code calculations to advanced analysis using the Finite Element Method.

## THE **eec** PLATFORM OFFERS MANY UNIQUE FEATURES

- An intuitive/concise user-interface that leverages years of ongoing customer feedback
- The ability to run in any compatible web browser, so no special software installation is required, and can be used on location in the field or at the desktop with the same ease of use
- All calculations are performed on powerful servers running in the cloud, so they don't use up any local CPU resources or require any special hardware to run
- The most important and meaningful results are clearly and concisely presented first, with additional results available at the click of a button
- Assessments can be saved to the user's local hard drive, and files from previous assessments can be loaded to automatically populate all input fields
- A PDF report is generated with each assessment – to document pertinent information about the assessment, the report header can be customized by the user

- Catalogue of pre-populated examples included in each WebTool, demonstrating typical-use cases and highlighting specific capabilities
- Opportunity to provide feedback directly from within the **eec** platform – users may send feedback, ask questions, provide general comments, and recommend future enhancements
- Access provided to E<sup>2</sup>G's extensive material database, with coverage of the most popular construction codes (i.e., ASME Section I, VIII-1, VIII-2, B31.1, B31.3, B31.4, and B31.8)
- Tabular input data that can be entered directly or copy-and-pasted from a spreadsheet
- Input fields containing built-in data validation logic checks so that users are alerted to out-of-bounds conditions that may lead to misleading results or errors
- Information buttons used to direct users to additional information for input fields that warrant a more thorough explanation
- Each WebTool is compatible with both imperial (US Customary) and metric (SI) unit systems
- WebTools that have undergone extensive verification and quality management per ISO 9001

## WHY THE WEB?

- No installation - No maintenance - Ever
- Runs in any compatible web browser
- Access on phones, tablets, and desktop browsers
- Calculations handled on powerful cloud servers
- Does not consume local CPU resources
- Instant access to updates and improvements
- User-friendly and easy to use, despite complex calculations going on under the hood



**FREE TRIALS OF WEBTOOLS ARE AVAILABLE.**

For additional details or questions, please contact [Software@E2G.com](mailto:Software@E2G.com)

**SMART TECHNOLOGY. ANSWERS FOR TODAY. INSIGHTS FOR TOMORROW.**

### CORPORATE HEADQUARTERS

20600 Chagrin Boulevard, Suite 1200  
Shaker Heights, OH 44122

### SATELLITE OFFICE

Houston, TX

### CONTACT

216.283.9519  
[Software@E2G.com](mailto:Software@E2G.com)  
[www.E2G.com](http://www.E2G.com)