Weir Minerals

Mining manufacturer thwarts theft with the Adobe® Digital Enterprise Platform to help control supplier and partner access to confidential documents

Costly theft of intellectual property
Weir Minerals delivers end-to-end solutions for all mining, milling, processing, and waste management activities and specializes in a wide range of slurry equipment including pumps, valves, hydrocyclones, wear resistant linings, and de-watering products.

The provision of spare parts to support equipment in the field is a major component of Weir Minerals’ business, and the company must be on its guard against replicators who illegally manufacture and distribute replicated parts for their equipment.

"We are under constant threat from other manufacturers who try to steal our designs," says Richard Hinsley, Director, Logistics and Supply Chain at Weir Minerals Australia. "Confidentiality agreements only go part of the way; physically securing and then managing the post-issue lifecycle of the documents provides greater security and control."

"We have launched several lawsuits over stolen IP, and we need to be constantly vigilant for the possibility of theft. While we seek to minimize any theft, should that occur, a key to successful prosecution is our ability to demonstrate we have made a concerted effort to protect our IP when it is revealed to suppliers and subcontractors."

Supply chain vulnerability
Within the high-touch, people-centric Request for Proposal (RFP) process, there is pressure to control RFP distribution, evaluation, and notification of commercially sensitive information. Weir Minerals risks losing substantial spare parts sales revenue because counterfeit copies of its unique pump components could become available from other market sources.

In some cases, spare parts were being illegally manufactured shortly after designs were finalized, highlighting the need for increased levels of protection of drawings distributed to the supply chain during the quotation and subsequent manufacture of components. After some evaluation, Weir Minerals deduced that the intellectual property (IP) contained in its confidential engineering drawings was being leaked to dishonest competitors. The drawings were most vulnerable to theft and duplication when the hard copies were in the hands of off-site subcontractors.

Timely distribution of secure, reliable, electronic documents
An IP protection application was developed by Adobe partner Avoka using the Adobe Digital Enterprise Platform (ADEP). The number one priority was to guard the design drawings when they were circulated outside the company to external contractors and suppliers, and to create an audit trail that recorded who accessed them and how.

"The Adobe Digital Enterprise Platform fell right into our sweet spot," says Hinsley. "We researched a few other solutions but couldn’t find anything else that came close to meeting our requirements."

Weir Minerals leveraged the Adobe Digital Enterprise Platform to deliver secure, reliable certified documents in Adobe Portable Document Format (PDF), and in doing so, accelerated distributing the drawings in the field.
Every time a secured document is sent, opened, and printed it needs to be authenticated with passwords and user IDs. Using the Rights Management capabilities in the Adobe Digital Enterprise Platform, Weir Minerals applies persistent dynamic enforcement on equipment designs and can protect against unauthorized access.

The new process involves Weir Minerals converting CAD drawings which are overlaid with a wallpaper graphic containing specific information applicable to each contract. The design drawings are converted to PDF and then automatically encrypted and checked in to a secure repository using the Content Services capabilities of the Digital Enterprise Platform. At this point, the PDF document is sent to the appropriate suppliers who must use allocated passwords to open them.

**Authenticating access**

With every project, there are four people within Weir Minerals who manage the supply chain and four people in the engineering division with access to the solution built using the Adobe Digital Enterprise Platform. The Process Management capabilities in the Digital Enterprise Platform automate routing drawings within Weir and eliminate the manual, multi-stepped processing associated with ‘request, approval, and release’ phases. Approximately sixty-one suppliers also have their own user IDs, and this number continues to grow.

Every time a secured document is sent, opened, and printed it needs to be authenticated with passwords and user IDs. “Each supplier is issued individual rights based on exactly what documents and which parts of the documents they need to see,” explains Hinsley. If printed, the wallpaper prints all over the drawing making it virtually impossible to hide where the document originated.

The Rights Management capabilities in the Adobe Digital Enterprise Platform are an important factor in the success of the solution. By using the Rights Management services in ADEP to encrypt files and apply persistent and dynamic enforcement on the Weir Minerals equipment designs, the company can track exactly who views each document and ward against unauthorized recipients opening them.

**Revocation of access rights**

Weir Minerals also manages the life cycle of the document through the revocation of rights once the job—or parts of the job—are completed.

Access and usage rights are managed dynamically by the company based on security policies that are put in place using Rights Management capabilities in the Adobe Digital Enterprise Platform. Weir Minerals assigns file access to suppliers based on their involvement at each stage of design development. Once their contribution is complete, their access is systematically revoked so they cannot open the document at a later date.

**Faster time to market**

Before the Adobe Digital Enterprise Platform, Weir Minerals instituted a policy of no electronic distribution of parts design documents due to an uncertainty about Internet security and the ease and speed with which drawings could be copied and forwarded. Instead, drawings were printed and stamped with patents and clauses and posted and couriered throughout the network. "Unfortunately, we discovered copies of these designs everywhere, scanned with the stamps electronically removed," says Hinsley.

"In the first six months, the Adobe Digital Enterprise Platform facilitated the distribution of 1,000 drawings for newly designed components into the supply chain throughout Australia, South Africa, the United Kingdom, Chile, and China. In that time, we have had no indications of theft, meaning we have potentially saved significant costs in lost revenues and legal fees."

Patricia Daly
Business Process Support and Training, Weir Minerals
Weir Minerals must constantly be on its guard against counterfeit copies of parts for its equipment being manufactured based on stolen design drawings. The company selected the Adobe Digital Enterprise Platform to help protect its intellectual property from being circulated to external contractors and suppliers.

By negating the manual steps that left the process prone to human error, Weir Minerals’ new, automated electronic supply chain means lead times are reduced. Staff and contractors work faster and—unencumbered by manual form completion—printing issues, unnecessary courier costs, and delivery delays are eliminated.

**Worldwide rollout**

"It took approximately six months from purchase date to deployment of a fully functioning application. In the first six months, the Adobe Digital Enterprise Platform facilitated the distribution of 1,000 drawings for newly designed components into the supply chain throughout Australia, South Africa, the United Kingdom, Chile, and China. In that time, we have had no indications of theft, meaning we have potentially saved significant costs in lost revenues and legal fees," recounts Patricia Daly, Business Process Support and Training, Weir Minerals. "We now have the utmost confidence in the way these drawings are being controlled and managed."

The success of this implementation has impressed upon Weir Minerals the value of an automated server-based business process. There are plans to roll it out throughout Weir Minerals globally. Says Daly, "We have a wish list of where to go next based on our new experience the Adobe Digital Enterprise Platform. We intend to use the audit log to generate reports for every piece of time-sensitive information that is accessed. Our long term goal is to use the Digital Enterprise Platform to manage document distribution at each of our design centers around the world."