

Gold

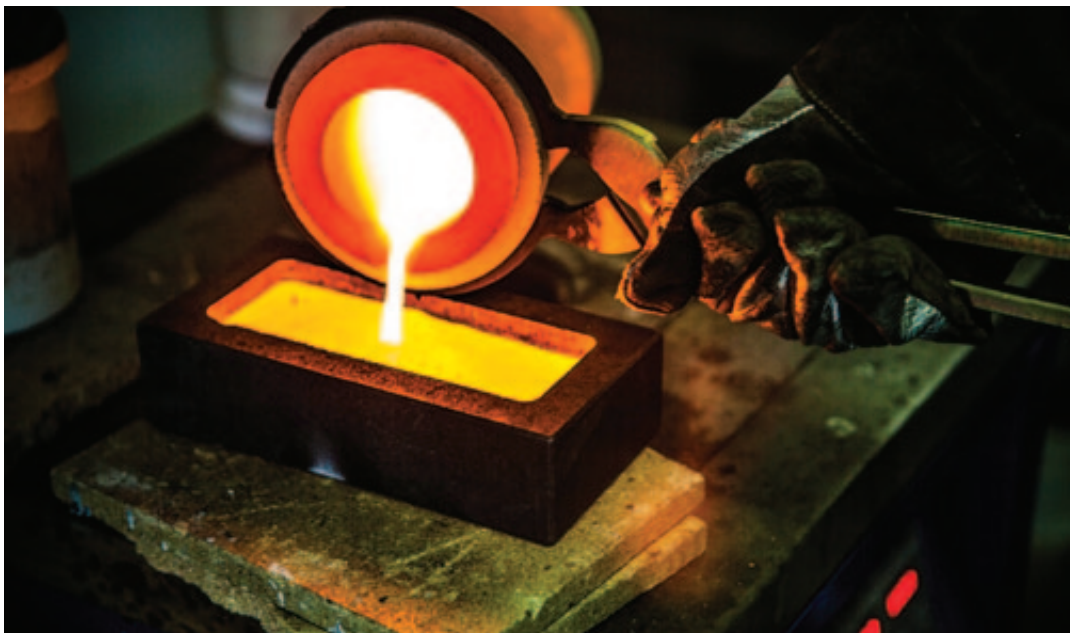
Au



Uses: For jewellery, in investments and uses in electronics and dentistry

Factors influencing demand:

Jewellery demand especially in India and China and for financial speculation



Yokogawa's involvement with gold

We have control systems in these mines



Cowal – Barrick Gold

Located in Western NSW, Cowal mine in 2011 produced 269,000 ounces of gold. It is an open pit. It is 100% owned by Barrick Gold Corporation of America. The gold is processed by carbon in leach and flotation methods. A Yokogawa Centum DCS controls the production process.



Hidden Valley Gold Plant - Newcrest

In the Morobe province of Papua New Guinea, the Hidden Valley mine is 50% owned by Newcrest Mining and 50% by Harmony Gold. Hidden Valley is an open pit mine, consisting of three main ore bodies: Hidden Valley, Kaveroi and Hamata. The processing plant utilises conventional gravity and carbon in leach circuits for gold and a Merrill Crowe circuit for silver. In 2013 Hidden Valley produced 170,008 ounces of gold and 1.7 million ounces of silver. A Yokogawa Centum DCS controls the production process with an Exaquantum plant information system.



Boddington – Newmont

Located in south west Western Australia. It is owned 100% by the Newmont Mining Corporation of America. In 2011, Boddington produced 741,000 ounces of gold and 30,000 tonnes of copper. Processing methods include Flotation gravity recovery and carbon in leach. It is an Open pit. A Yokogawa Centum DCS controls the production process with an Exaquantum plant information system.



Kalgoorlie Consolidated Gold Mines KCGM

– Newmont and Barrick JV

Kalgoorlie, Western Australia. It is an open pit mine. It produces 800,000 ounces per year. The processing takes place at the Fimiston Plant and the Gidji Roaster and involves froth flotation, roasting and CIL. A Yokogawa Centum DCS controls the production process.



Telfer – Newcrest

In the Great Sandy Desert in Western Australia, the mine is 100% owned by Newcrest. The mine consists of the Main Dome and West Dome open pits and the Telfer underground mine. The ore from the mining operations is processed by a large, dual train, comminution circuit followed by flotation and cyanide circuits, which produce gold doré and a copper-gold concentrate. The process is complex because of the need to accommodate differing ore types. In 2013 the Telfer mine produced 525,500 ounces of gold and 26,453 tonnes of copper. A Yokogawa Centum DCS controls the production process..





Cadia - Newcrest

Cadia Valley Operations (CVO) is 100 per cent owned by Newcrest and located approximately 25 kilometres from Orange in central west New South Wales. CVO comprises three mines - the Cadia Hill open pit mine, and the Cadia East and Ridgeway underground mines. These are all large scale mining operations using either block and panel caving or open pit mining methods. At CVO, Newcrest produces gold doré from a gravity circuit and gold-rich copper concentrates from a flotation circuit. In the financial year ending 30 June 2013, CVO produced 446,879 ounces of gold and 53,912 tonnes of copper. A Yokogawa Centrum DCS controls the production processing while Yokogawa Stardom SCADA plc's control the underground conveyors some of which are 3kms away.



Reefton – Oceana Gold

Located on the west coast of the South Island of New Zealand, Oceana Gold's Reefton is an open pit mine that produced 63,000 ounces in 2012. Its processing plant produces a refractory concentrate for further processing at Macraes plant. The processing plant is controlled by a Yokogawa Centum DCS.



Macraes – Oceana Gold

Located in the Otago region of the South Island of New Zealand it consists of the Macraes open cut mine and the Frasers Underground mine. The mine produced 169,000 ounces in 2012. The processing plant uses a pressure oxidation plant for the processing of the sulphide ore. The processing plant is controlled by a Yokogawa Centum DCS.



Didipio – OceanaGold

Located in the northern island of Luzon in the Philippines, this mine was commissioned in late 2012. The mine is designed to produce 100,000 ounces of gold and 14,000 tonnes of copper per year. It consists of an open pit and an underground mine. The processing point is controlled by a Yokogawa Centum DCS.



Obuasi – AngloGold Ashanti

Located in south west Ghana. In 2004 it produced 255,000 ounces of gold. It is an underground mine and surface mine. It produced approximately 260,000 ounces of gold in 2012. The processing point is controlled by a Yokogawa Centum DCS.

Yokogawa Instrument Users

- **Gold Field's Agnew mine**
 - Goldfields region of WA
 - AXF flow meters
- **AngloGold Ashanti's Sunrise Dam**
 - Goldfields region of WA
 - EJX transmitters and analyser products
- **Alacer's Avoca Mine** - Goldfields region of WA
 - analyser products
- **Evolution Mining's Ballarat Gold mine**
 - Victoria
 - AXF flow meters and Analyser products
- **Barrick's Darlot, Lawlers, Plutonic and Cowl Mines** – WA & NSW
 - AXF flow meters, EJX transmitters and analyser products
- **Newcrest's Cadia Valley mine** – NSW
 - AXF flow meters, EJX transmitters and analyser products
- **Resolute's Carpentaria Gold mine**
 - northern NSW
 - analyser product
- **Norseman Gold's Central Norseman**
 - Goldfields region of WA
 - AXF flow meters, EJX transmitters and analyser products
- **Crocodile Gold's Cosmo Mine** – NT
 - AXF flow meters, EJX transmitters
- **KingsGate's Challenger mine** – SA
 - analyser products
- **Evolution Mining's Edna May mine**
 - Goldfields region of WA
 - AXF flow meters, EJX transmitters
- **St Barbara's Gold Ridge mine**
 - Solomon Islands
 - AXF flow meters, EJX transmitters
- **Silverlake Resources' Randall mine**
 - Goldfields region of WA
 - AXF flow meters and analyser products
- **Newmont & Barrick JV SuperPit mine**
 - Kalgoorlie WA
 - AXF flow meters, EJX transmitters and analyser products
 - Rotameter & DY vortex meters
- **Evolution Mining's Mt Rawdon mine**
 - central QLD
 - EJX transmitters
- **Newcrest's Lihir Gold mine** – PNG
 - AXF flow meters, EJX transmitters and analyser products
- **Evolution Mining's Cracow mine** – central QLD
 - AXF flow meters
- **Navigator Resources' Bronzewing mine**
 - Eastern Goldfields WA
 - analyser product
- **Newcrest's Telfer mine** - East Pilbara WA
 - AXF flow meters, EJX transmitters and analyser products
- **Newmont's Boddington mine** – south west WA
 - AXF flow meters, EJX transmitters and analyser products
- **Newmont's Tamani mine** – NT
 - AXF flow meters, EJX transmitters
- **Norton's Paddington gold mine**
 - Goldfields region of WA
 - EJX transmitters and analyser products
 - UT temperature controllers
- **Gold Field's St Ives mine**
 - Goldfields region of WA
 - AXF flow meters and analyser products
- **Crocodile Gold's Stawell Gold mine** – Victoria
 - AXF flow meters, EJX transmitters and analyser products
- **Oceana Gold's Reefion and Macrae's mines**
 - South Island New Zealand
 - AXF flow meters, EJX transmitters and analyser products