



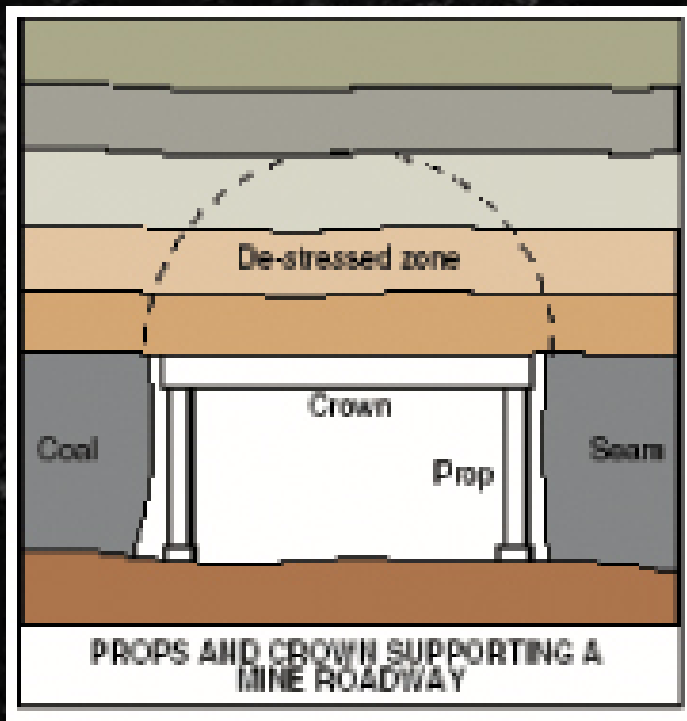


Engaging your Workforce to assist Innovation

What does Rambor do?

- Rambor provides solutions for strata control in underground mining, tunneling & construction by designing & manufacturing equipment used for the installation of roof & wall retention systems.

What is roof & wall retention?



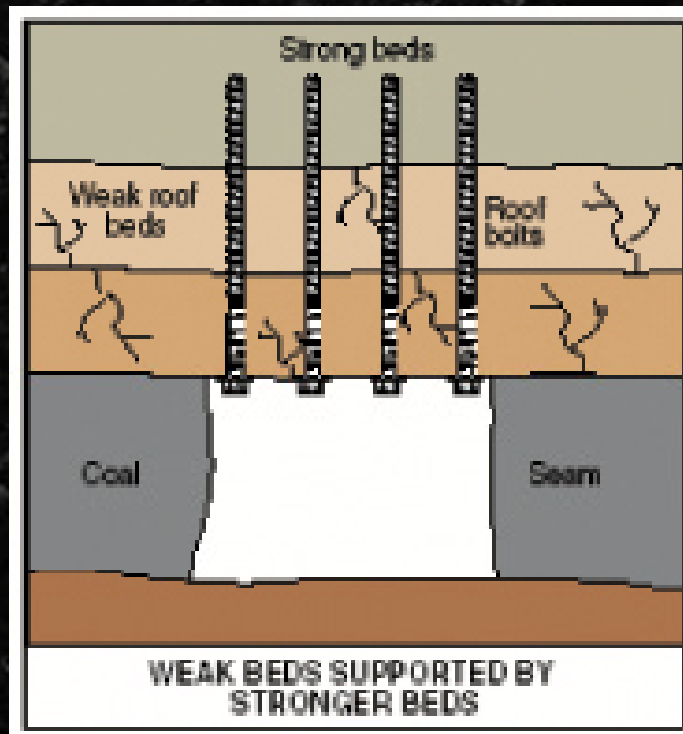
The purpose of strata control is to control the movements of rock where an excavation has been made.

To achieve this, supports are used to resist the movement of the strata in the de-stressed zone around the excavation.

Supports can be either external or internal.

An external support such as a prop or a steel arch supports the strata from the outside by preventing it from moving into the opening as shown the diagram.

What is roof & wall retention?



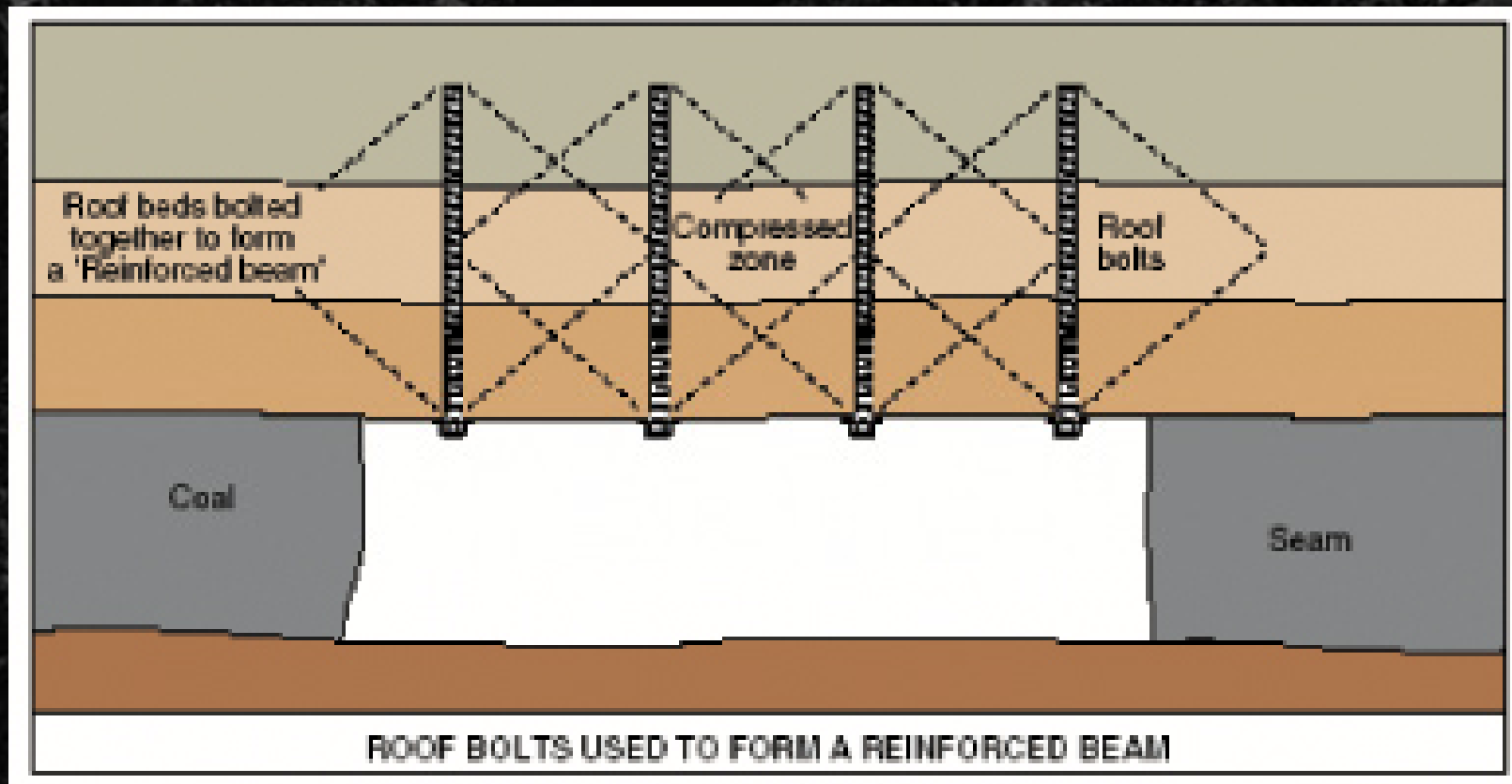
An internal support such as a roof bolt will strengthen the strata and support it.

The diagram shows roof bolts being used to bind the roof beds together making a stronger roof.

The weak beds are bolted to a stronger bed above and supported by it.

If supports are set properly and used in the correct places the problems caused by poor strata control will be reduced and the working environment made safer.

What is roof & wall retention?



How is Rambor's equipment used?

- Drilling
- Pushing
- Mixing
- Tensioning

Pneumatic Hand Held Roof Bolter



Key Product Attributes

- Performance
- Lightweight
- Durable
- Reliable
- Complies with industry std & codes

In House Processes

- Milling CNC & Manual
- Turning CNC & Manual
- Gear Cutting
- Broaching
- Composite winding
- Grinding
- Drilling
- Moulding
- Pressing
- Welding
- Painting
- Testing

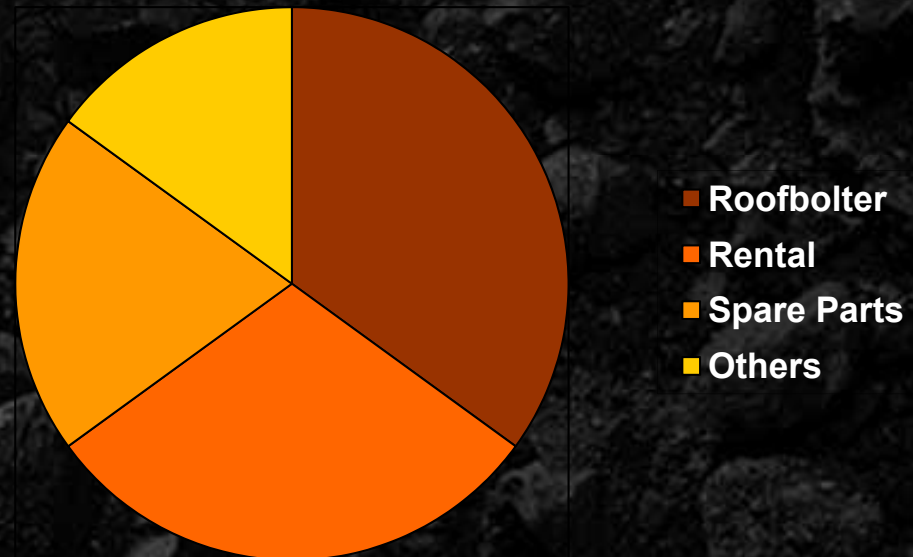
Out Sourced

- Foundry Castings
- Surface Hardening
- Gear Grinding
- Minor Fabrication

Products by sales %

- 35% - Roof bolter
- 30% - Rental & Servicing
- 20% - Spare Parts
- 15% - Others

- Rib Drill
- GP motor
- DR Motor
- LFD
- Truss master
- Spiling rig
- RDR2
- Grout Pump
- Strap Jack
- High/Low Seam Drill



Manufacturing Statistics

- Rambor manufactures over 2200 commercialised components
- Rambor has 2205 buy-ins (raw material & proprietary parts)
- Stock levels of +300,000 parts
- Over 90% of product is in house manufactured

Markets

- **60% Domestic**
- **40% Export**
 - Russia / Siberia
 - Ukraine
 - Germany
 - USA
 - UK
 - Japan
 - Vietnam
 - Indonesia
 - New Zealand
 - Czech Rep
 - China
 - South Africa
 - Poland

R & D

- 25% of Profit is redirected into R & D
- Future of the business & an integral part of the business model

Risk Management ~ Systems

- Currently QA to ISO 9001 aiming for aerospace
- ERP (Enterprise Resource Planning) software system
- Bar Coded Products, Raw Materials, Buy ins & Consumables
- Bar Coded Processes
- Automated Purchases
- Head office access
- Integration of OH & S with manufacturing
- Independent environmental audit of atmosphere
- Independent hazard chemical storage audit
- WAM (Work Area Management)

Innovation Process

- Genius (Innovation) is 10% inspiration & 90% perspiration
 - Thomas Edison
- 90% perspiration is very relevant to Lean

Innovation Process

- Identify Risks
 - Technical
 - Commercial
 - Reputation
 - Do not over sell the solution to the customer with unrealistic expectations
 - This is a prototype....it will require tweaking
- Define Success
- Define Failure

Innovation Process

- Design
 - Specification. It is very rare that the Engineering was wrong. It is realised later on that the original specification wasn't relevant or prioritised correctly.
 - Identify unknowns. Design with a Plan A,B,C approach so that the initial design does not get thrown away
- How do we engage the Design workforce
 - High risk areas ~ Design several options for peer review
 - Encourage first principle design for difficult problems
 - Use what we already have for low risk requirements

Innovation Process

- Project Management
 - Gantt Chart
 - Define Resources
 - Define Milestones
- How do we engage the Project Management workforce
 - Key Personnel ~ If the Project Team doesn't get it right then you are not going to reach your targets

Innovation Process

- Manufacturing
 - Integrating a project into normal manufacturing
- Planning ahead with Project Manager to allocate resources to alleviate disruption to day to day production using forecasting.
- How do we engage the Manufacturing workforce
 - Without planning, hearing the letters R & D would cause distress & reluctance for co operation.
 - Making sure that the workforce have a perceived value in the company's future security by engaging in R & D

Innovation Process

- Documentation
 - Understanding the risk
 - Empathy for the end user
- How do we engage the Documentation workforce
 - Communication with all parties
 - Use this process as a check for fit for purpose

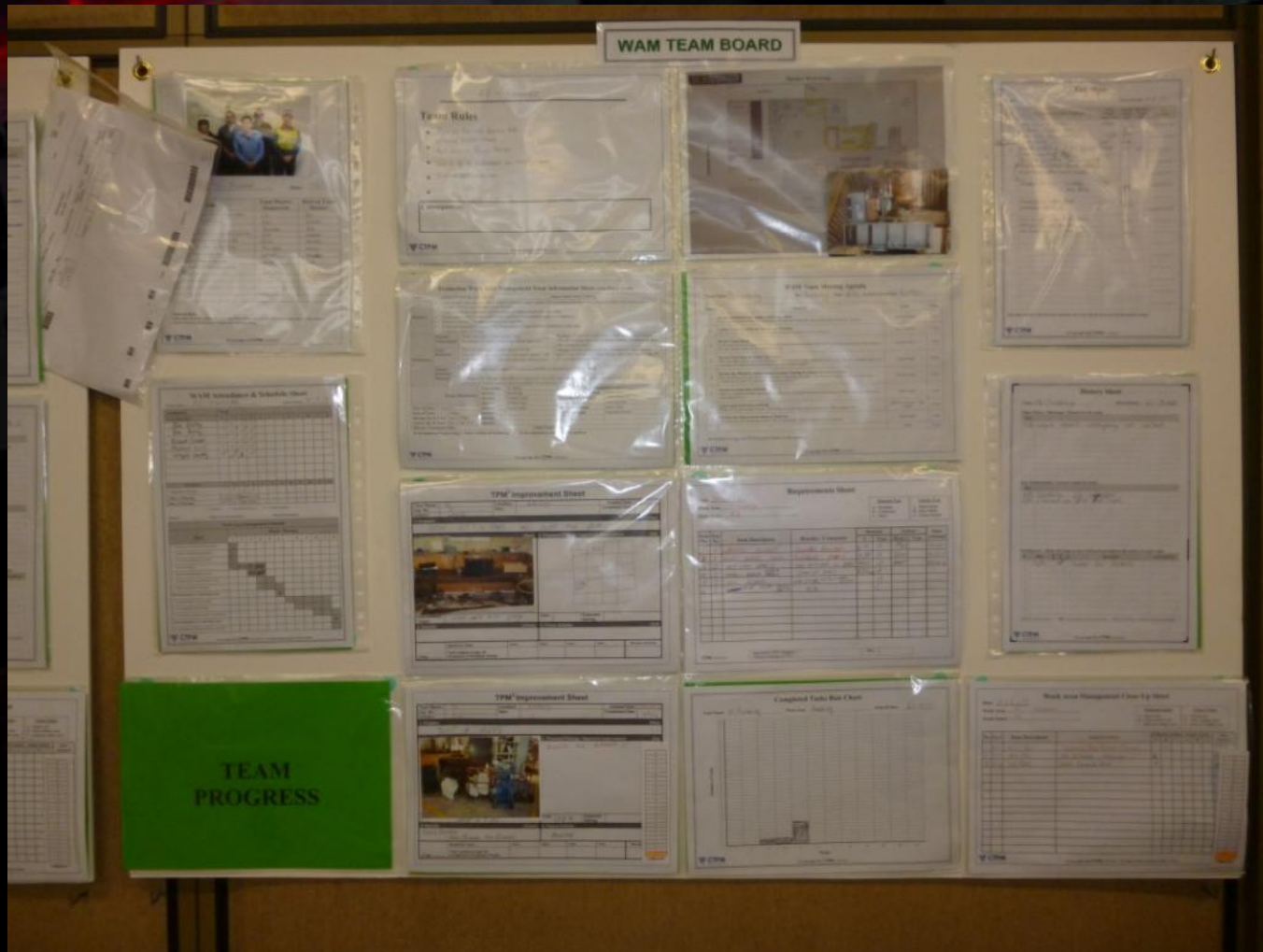
Innovation Process

- Commissioning & Testing
 - Be fully prepared to implement plans B,C,D....if required
 - Ensure the customers are fully briefed on possible outcomes, good & bad
- How do we engage the Commissioning workforce
 - Ensure there is confidence in the solution before bring to site
 - Understand the risks
 - Involve all parties to observe the offsite testing

Work Area Management (WAM)

- Implementation & Initial Perception by Workforce
 - Skepticism by the workforce
 - In a way you are telling your workforce that they are not doing their job properly
- Benefits
 - Team Bonding
 - Group/Collective ownership
 - Supplying a consistent & repeatable process (tool) for your staff to channel talents that they didn't know that they had.
 - Pride

Work Area Management (WAM)



Work Area Management (WAM)



Work Area Management

Winding Area Before



Work Area Management

Winding Area After



Summary

- Key points
 - Inspire
 - Pride
 - Engage
 - Ownership
 - The cup is half full
 - Praise
 - Get excited & show it
 - Humour
 - Don't limit this process to just your workforce but apply it to your customers & suppliers

Questions