

SAFETY CLOTHES

AFI, Sydney
18th October, 2018

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Why am I here?

- Invited to make Presentation because Pyrotek supply safety clothing.
- I don't intend to discuss Pyrotek supply.
- My objective is to stimulate some thought amongst the audience. "Are you happy with the Safety Clothing worn at your Plant?"
- Disclaimer - I have not visited any of your Foundries, so none of my comments are based on observations at anyone's operations

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Why should you listen to me?

- Old enough to have “war” stories from a history of production in steelmaking and aluminium smelting.
- Evolved through:
 - Long sleeved shirts and trousers on the job (typically repurposed casual clothes which included pink corduroy jeans)
 - Long flannel shirts
 - Parramatta cloth coats
 - Developments of specialist PR97 woolen fabric
 - Introduction of high visibility colours and reflective strips (day & night impact)
 - Fifteen year old photo

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Why is this personal?

- I have had workmates and colleagues badly injured or killed through workplace accidents (hit with molten material or exposed to flame, struck by vehicles).
- Some of the survivors could never return to their original jobs
- Lifelong impacts outside work due to scars (physical and emotional)
- Today's standards of safety clothing would not have saved all of them
- But, some would have had less severe injuries!
- Many other potentially serious incidents were minor injuries, incidents, or went unreported, due to protection from safety clothes.

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Why is this personal?

- Have you given any thought as to the potential impact on yourself if a serious injury or fatality were to occur to one of your team?
- Potential for sizeable fines or even terms of imprisonment
- The impact of your own feeling of responsibility on your life and work.
- I know a senior manager who was transferred out of the country to another position after a fatality as a precautionary measure
- I know a production manager who had 2 separate fatalities amongst his team. His employer decided, as a precautionary measure, that he would never hold another production position.
- So, you have "skin in the game".

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Consider Gloves as an example.

- Do members of your team wear leather gloves for hot work, even though they risk the gloves shrinking on to their hands if over-heated?
- Do people wear close fitting rubber gloves for added comfort under loose outer gloves?
- Do people wear too large, loose gloves, which reduces their ability to manipulate tools and button?
- Do people do silly things to test their gloves?

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Reducing Risks in the Workplace

- Hierarchy of Controls is a system used in industry to minimize or eliminate exposure to hazards.



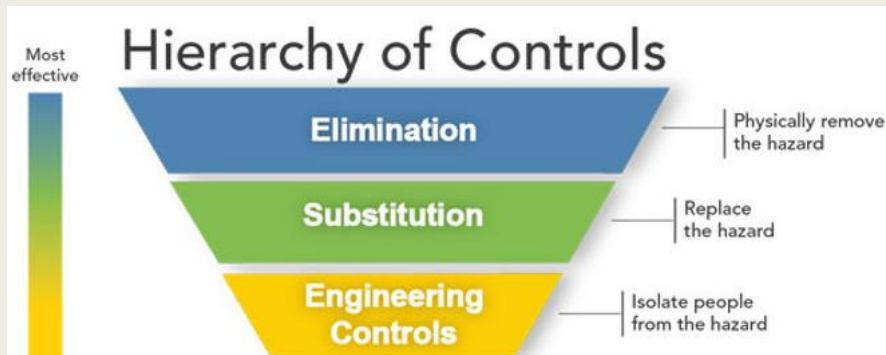
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Reducing Risks in the Workplace



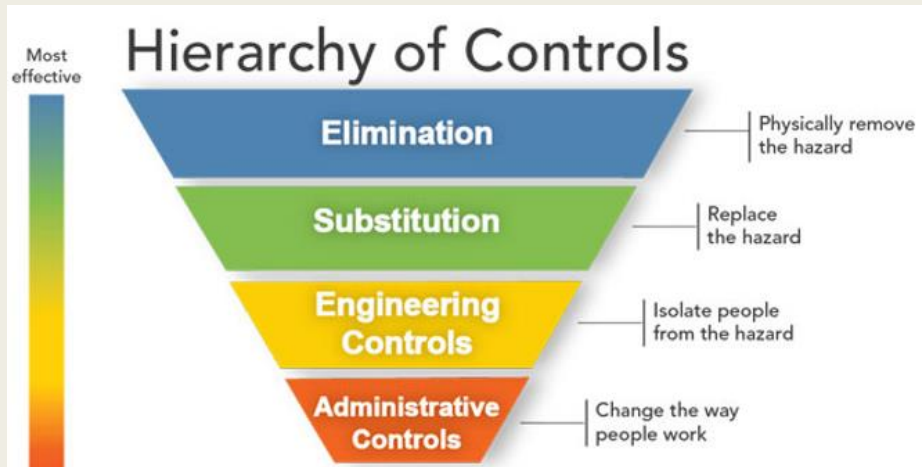
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Reducing Risks in the Workplace



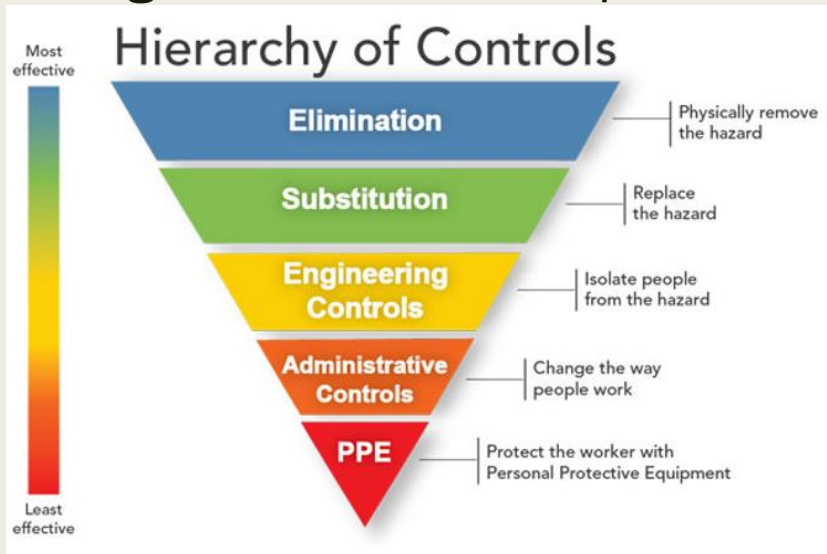
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Reducing Risks in the Workplace



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Reducing Risks in the Workplace



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Let us talk about PR97

- PR97 is a fabric that has been developed for protection against flame, molten metal splash, radiant heat, and in some versions, electric arc flash.
- Inherently flame retardant and arc resistant (within the fibre itself). The original blend was wool and FR (fire resistant) viscose material.
- A local fabric, originally developed in New Zealand in 1997 and now made at the Bruck factory in Victoria.
- Rapid acceptance in USA has made this a global brand.
- But, this is not the only supplier of fabric for Protective Clothing for the hot metal industries. It is the one I am most experienced with.
- Two different fabrics and a number of different fabric weights (expressed in gsm)
- A large range of colours, with some certified as daylight high visibility.

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Let us talk about PR97

- PR97 has been tested and classified according to a number of ISO tests
 - *Protection against molten aluminium splash*
 - *Protection against molten iron splash*
 - *Flame resistance*
 - *Protection against radiant heat*
 - *Protection against convective heat*
 - *Protection against electric arc.*

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Let us talk about PR97

- Each batch of PR97 is subject to a range of laboratory tests to ensure appropriate quality is achieved and maintained
- Usable width (cm)
- Fabric Weight (gsm)
- Wash Shrinkage (Warp & Weft direction)
- Breaking Force (Warp & Weft direction)
- Tear Resistance (Warp & Weft direction)
- Colour Fastness to Rubbing
- Flame Resistance (Warp & Weft direction)
- Heat Resistance (Warp & Weft direction)

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Let us talk about Safety Clothes

- There are other materials to make safety clothes from besides PR97, and your supplier can talk about pros and cons.
- PR97 is not the recommended fabric for all molten materials. Does not perform to the same level with zinc. Your clothing supplier should be able to recommend alternatives
- There are other manufacturers making safety clothes from PR97, besides Pyrotek.
- If you have sat through this Presentation, and you are comfortable with your Organisation's selection and use of Safety Clothes, I commend you.
- If you have sat through this Presentation and you are not comfortable, I have not wasted your or my time!
- I trust this has been food for thought.

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In conclusion

Thank you for your time and attention.