Safety and health alert

37/99 Explosion of wheelbarrow tyre during inflation

Incident

A man received fatal injuries when struck in the chest by a wheel rim that separated violently while being inflated with an airline at a service station. The wheel, which had been removed from a wheelbarrow, was a split design that had been bolted together.

Investigations revealed that the rim was thinned in the area of the bolts and rusted. It was also revealed that the pressure to the airline was not regulated from the compressor.

Factors

1. The tyre was inflated beyond the maker's recommended maximum pressure.
2. The wheel rim was thinned and rusted.
3. The pressure available at the service station forecourt was unregulated.
4. The wheel had been removed from the barrow thereby losing some of the protection provided by the barrow frame.

Recommendations

1. Information or warning signs should be displayed at service stations advising of the risks associated with the inflation of tyres, and particularly split rims.
2. Tyre pressures should not exceed the manufacturers' recommendations.
3. Wheels should not be inflated if damage or corrosion is evident.
4. Small tyres that require only a few seconds to inflate with high pressure equipment should only be inflated with automatic equipment that cuts out at a pre set pressure, or be inflated with a manually operated-pump.
5. Where practicable wheelbarrow tyres should be inflated on the barrow as the frame may afford some degree of protection in the event of tyre/rim failure.
6. Wherever practicable a tyre cage or protective barrier should be used when wheels with any type of split rim construction are inflated.

Whilst this incident occurred in another state the details are presented here in an attempt to prevent a similar accident in West Australia.

Further Information

Further information can be obtained from the WorkSafe internet site www.worksafe.wa.gov.au, or by contacting customer service on 1300 307 877 or email: safety@docep.wa.gov.au.

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