

More Discipline Please.....!

Establishing and Embedding an Effective Maintenance Planning Process

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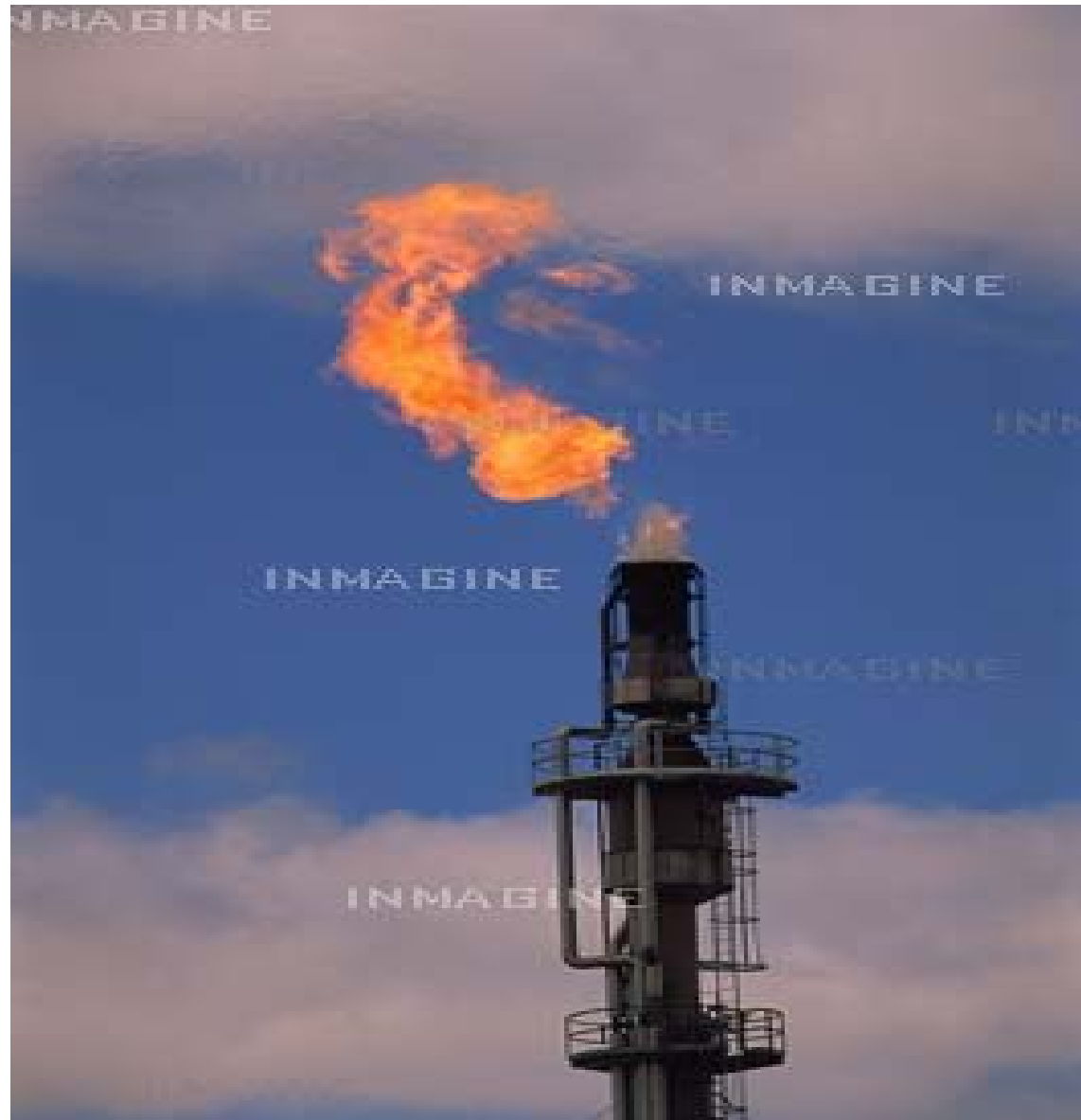
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Proportion of Injuries that occur on Reactive Jobs ?

> 60% !

(source: IDCON safety / reactive maintenance survey www.idcon.com)



Flaring = Reliability Problem (=Bad Planning?)



Preventable ?

Polyethylene



Application: Film



Application: Pipe



Application: Rigid Packaging



Application: Dairy



Application: Wire and Cable

Qenos Altona



Dow Chemical
BASF

Qenos Olefins

Qenos Elastomers

Dow Chemical

Australian Vinyls

Qenos Plastics

Qenos Resins

Olefins Maintenance & Reliability Dept



- **approx 50 tradespeople**
- **budget approx \$11M**
- **SAP-PM**
- **300-400 work orders per month**

Background to Today's topic

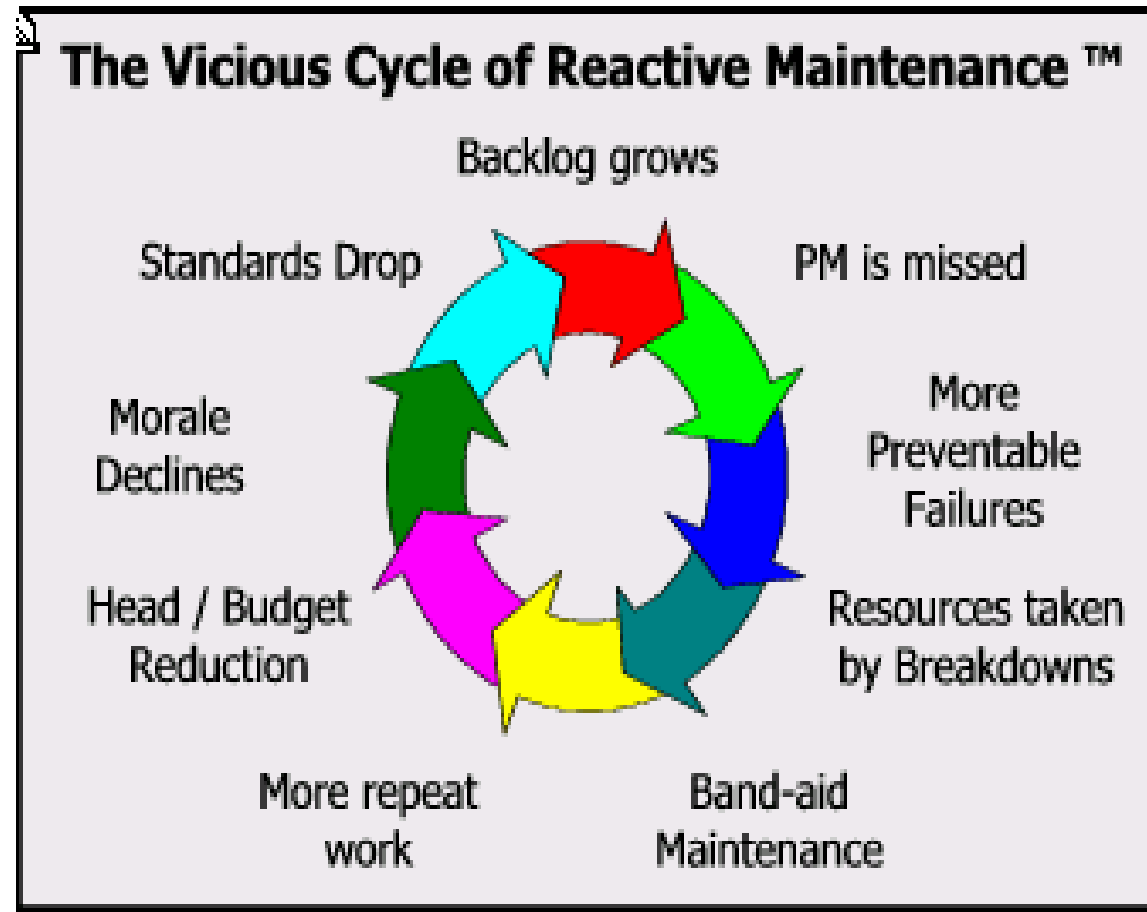
Events of 1999-2001:

- **Previous alliance partnership dismantled**
- **Trades workforce moved off Shift Work onto Days**
- **Prolonged maintenance shutdown, major IR issues**
- **Plant closures, major personnel /structural changes**

resulted in

**Previous good maintenance planning
processes “lost”**

Where we found ourselves in 2002



(Chart from PMO2000 website www.pmooptimisation.com.au)

How to break the cycle?

- 1. Tight control of injected work**
- 2. Clearly define responsibilities for “the plan”**
- 3. Systematic scheduling process**
- 4. Improve focus on execution of the plan**
- 5. KPI's**
- 6. Continuous improvement mechanism**

Control Injected Work

- **Revamp Priority System & Communicate**

- 1 Break-in immediately**
- 2 Break into schedule**
- 3 Complete by specified date**
- 4 Opportunistic Scheduling**
- 5 Future budget cycle**

- **Only Shift Managers are authorised to raise P1's**
- **P2's raised by anybody**
 - **BUT only authorised via morning Ops meeting**
 - **jointly by Process & Maintenance**
- **Full list of current P1/2's reviewed daily at Ops mtg**

Define Responsibilities:

“Who Owns the Plan?”

- **Getting the right input**
 - **Area Ops coordinator**
- **Developing and communicating the plan**
 - **Planning Group**
- **Executing the plan**
 - **Maintenance Coordinators**
- **Reviewing Performance vs the plan**
 - **Leadership Group**

Systematic Process

Moved from a 1-week to 2-week planning cycle

- 1. Review SAP- generated routines**
- 2. Ranked list of other work**
- 3. Available man-hours?**
- 4. “Rough-cut” plan for review**
- 5. Capacity Planning process via SAP**
 - Balances resource requirements & availability**
- 6. Final plan as MS-Project file**
 - Wide range of customers, many not SAP users**
 - Enables easy filtering by Area, Workgroup, Job type**

Execution of Plan

- **Maintenance coordinators accountable for plan completion**
- **Daily 3pm meeting**
 - ensure planned jobs able to be executed next day
 - deal with unexpected items
- **Reactive crew held for P1/P2 jobs**
 - assigned to back-up jobs if no injected work

KPI's to tell us how we're going and where to focus efforts

- **% time spent on injected work**
 - **% time spent on planned work**
 - **% plan completion**
- (Logging hours against jobs into SAP is critical)**



KPI's 2002 - 2005

	Before	After
% Hours on Reactive Work	15 - 25	10 - 15
% Hours on Planned work	40 - 50	70 - 80
% Hours "Bullbar"	25 - 45	10 - 20
% Plan completion	20 - 30	45 - 60

Forum for Continuous Improvement

- **“Planning Excellence Team”**
 - every two weeks, 1 hour
 - all key players in the process
- **Mission is to improve plan completion**
 - analyse the data and the process
 - identify shortcomings & potential improvements
 - take action
- **Also contributes to buy-in and moving towards a culture that “respects the plan”**

Other relevant KPI's

- **Work order Backlog**
- **Work Order Clearance Rate**
- **Waivers raised**

- **MEI – “Manufacturing Effectiveness Index”**

- **Maintenance Costs**

What now ?

- **Minimise Bullbar / Maximise plan completion**
- **Critical Equipment List**
 - **Criteria to guide injected work authorisation**
- **Increase participation of shift operators**

Cultural Change :

RESPECT THE PLAN !!!!

Conclusions & Challenges

- **How well do you control injected work?**
- **Do you have a Bullbar problem?**
- **Is the Planning process well defined?**
- **Do people understand their roles?**
- **What measurement, review, and improvement processes are in place?**

“60%+ of injuries occur during reactive maintenance”

Thanks for your attention !