

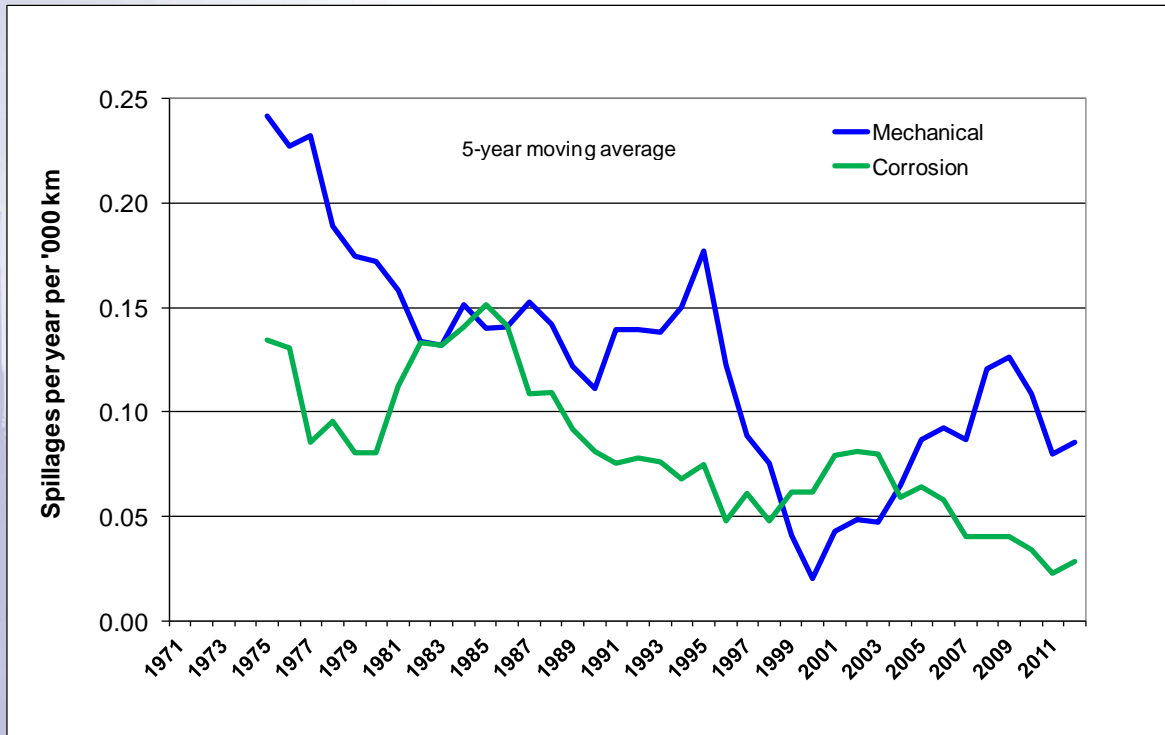
concauwe



Is there a link between ageing and mechanical/corrosion failures?

Jean-François Larivé
on behalf of **CONCAWE**

Cold pipelines only

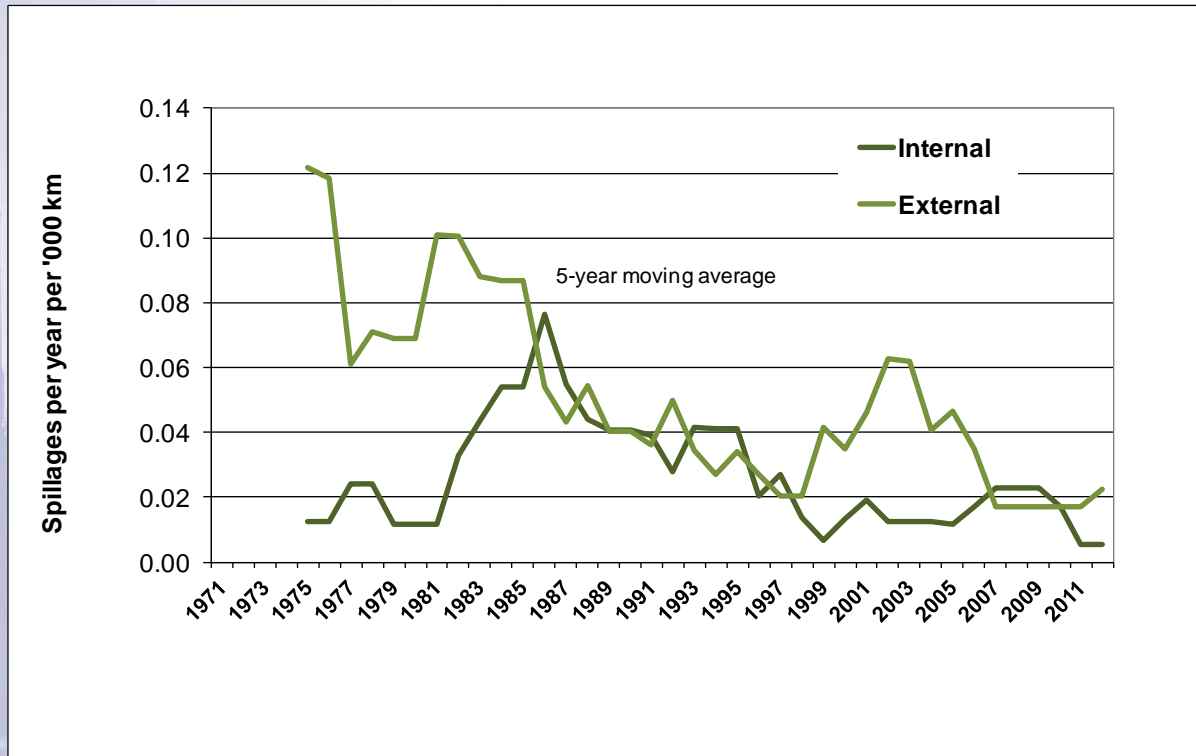


- ▶ **Corrosion failures frequency have declined steadily over the years**
- ▶ **An marked increase of mechanical failures frequency during the last decade attracted attention to a possible link with the ageing of the pipeline network**

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► **Both internal and external corrosion appear to be under control**

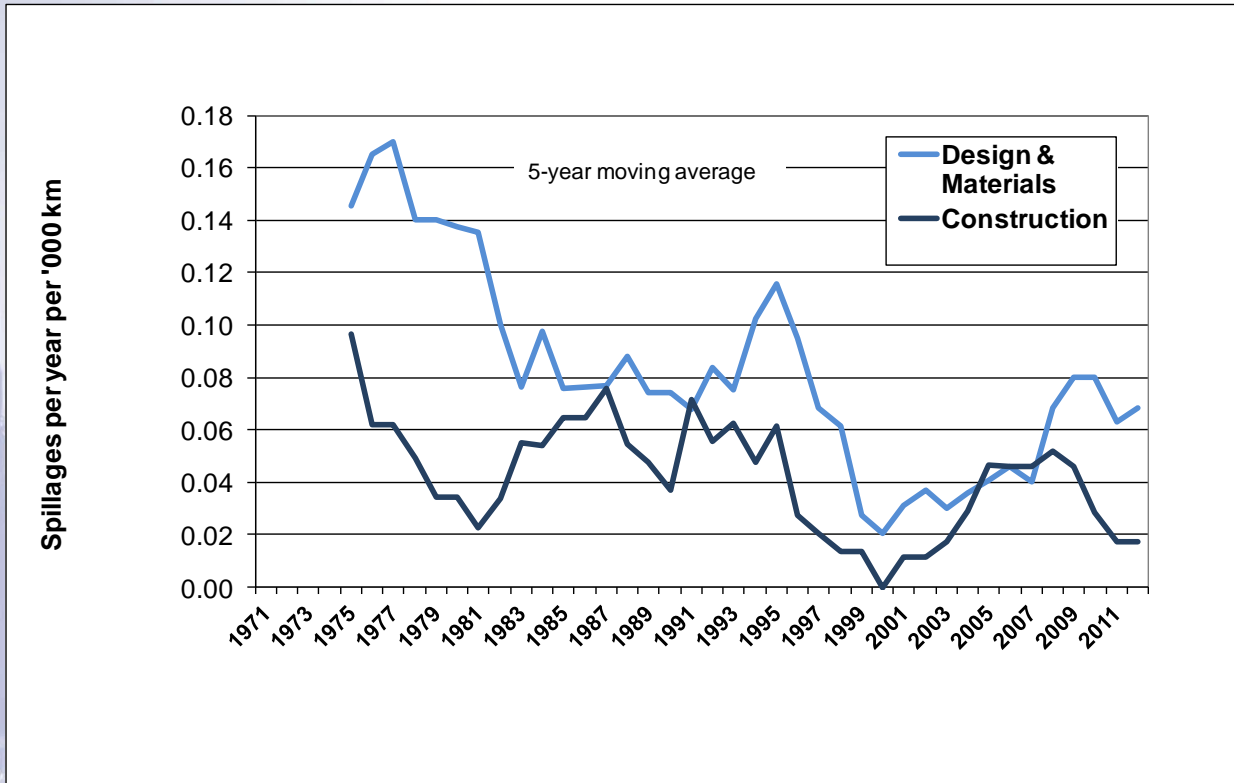
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► **Increased failure rate could be attributed to both design & materials and construction**

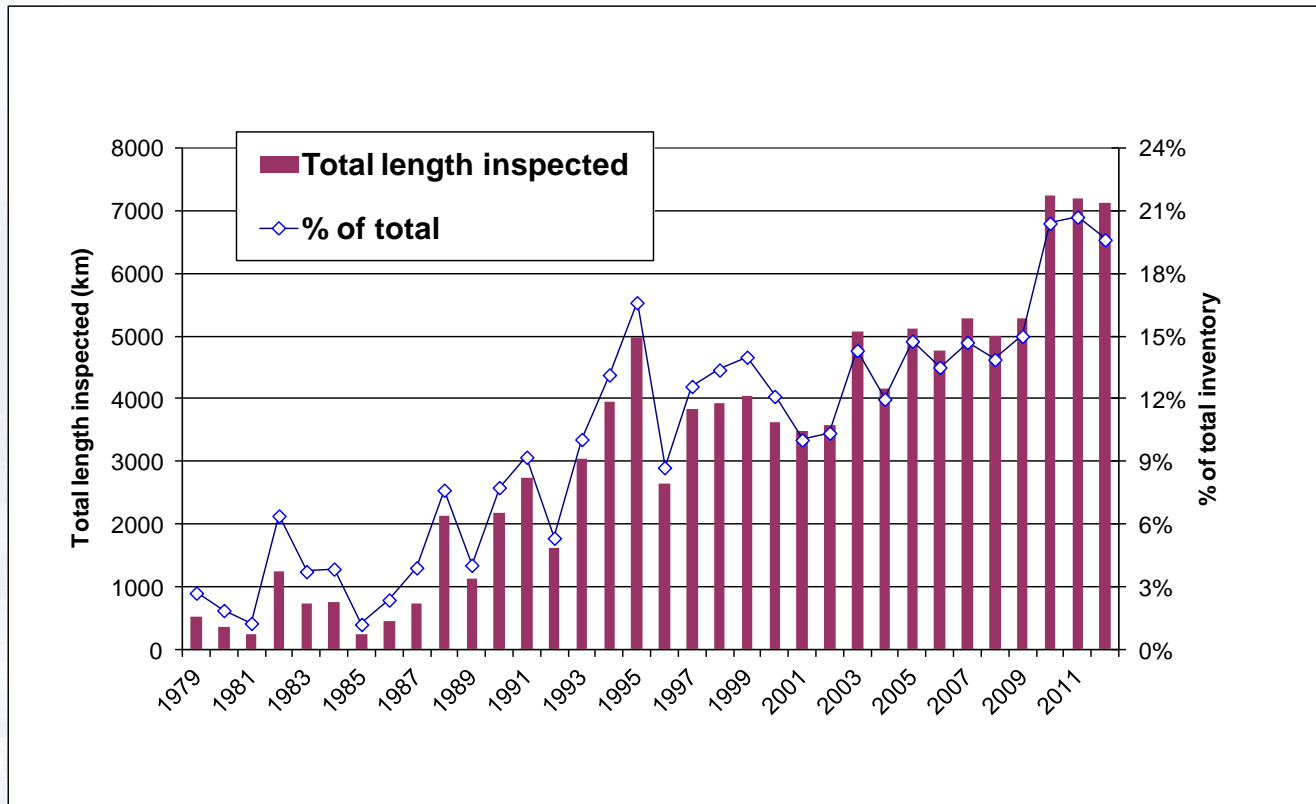
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- ▶ **CONCAWE analysed the mechanical failures over the last 13 years, obtaining additional information from operators where required**
- ▶ **The objective was to find out how many were related to fatigue defined as:**
"the deterioration of the metal structure of pipelines resulting from fatigue caused by normal operation (pressure cycles etc.)"
- ▶ **Out of 37 failures**
 - ▶ **26 were definitely not fatigue-related**
 - ▶ **4 were probably fatigue-related**
 - ▶ **In 7 cases it was not possible to pass a judgement**
- ▶ **Since the beginning of the decade, the frequency of mechanical failure has resumed a downward trend**



- ▶ Ageing does not appear to directly translate into increased failure rate
- ▶ Improved monitoring and inspection techniques play a major role in ensuring pipeline integrity



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