## Making Permit to Work Work for Process Safety - and Vice Versa Thoughts on What a Good PtW System Looks Like

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An effective Permit to Work (PtW) system is pretty much globally accepted as a cornerstone of safe working in the process industries. It is also very long established; many companies will have systems with roots going back over 40 or more years. Indeed, for many companies PtW was the first, or certainly one of the first, parts of safety to be formalised and written down as a procedure which had to be followed. PtW's importance is emphasised in IChemE's Fundamentals of Process Safety course, firstly by discussion of the failings of the PtW system on Piper Alpha, and later in the course by underlining the permit system's key role in ensuring safe operations.

However, PtW is not often discussed in Process Safety circles, possibly because - in the authors' view - it is thought to be so well known and "understood" that we have little more to learn. The lack of discussion is also probably because, although we formally acknowledge the importance of a permit system to process safety, in practice what we actually do is use the PtW system to give operational safety and to satisfy the statutory need for risk assessment. We seem all too often to have forgotten the PtW's importance in Process Safety, its importance in the management of a plant even when we breach that plant's fundamental integrity. On Piper Alpha it was not the job itself that failed to be controlled safely but the management of the maintenance process and the integrity of the hazardous materials being processed.

Drawing on their experience of auditing PtW (and process safety) systems in many different countries, the authors will draw out lessons from the problems they have observed, giving examples of incidents resulting from failures of the local PtW system. The paper will explore and emphasise the links to process safety and explore the vital role of the PtW system in the controlled management of high hazard plant. The paper will discuss how PtW systems should be managed, at plant, site and company level, and will set out the key elements of a PtW system that managers and auditors should look for when inspecting, reviewing or auditing PtW systems.