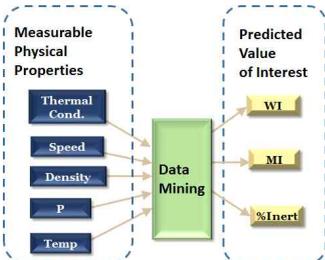


CONCEPT PAPER for KIER International Cooperation project

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<u>Title</u>	Smart Control Technology with Predictive Sensor by data mining			
<u>Description</u>	<p>● <u>Barrier(s) to tackle</u> -The influence of fuel composition on the combustion and emission characteristics of natural gas fueled engines, industrial furnace is very important and makes problem of air/fuel ratio control. - Real-time, economic & reliable natural gas fuel property sensor can be effectively used to apply to control system in the condition with variation of fuel quality.</p> <p>● <u>Strategy to solve</u> -Adaptive combustion control technology for the seasonal, regional variation of fuel quality. -On-board, real-time prediction technology of key fuel properties (such as Wobbe Index, Methane Index and Inert gas composition) - Making predictive sensor based on data mining method.</p> <div style="text-align: center;">  <p><< Predictive sensor concept >></p> </div>			
<u>Outcomes*</u>	<ul style="list-style-type: none"> ● <u>Publications and/or Patents : 2 SCI, 1 Patents</u> ● <u>Classification efficiency 95% (current 85%)</u> ● <u>Energy efficiency increase 10% due to adaptive combustion control for variation of fuel quality</u> 			