

Biography



Dr. Hans-Joachim Wick has 30 years of engineering experiences in process automation. At first he was engaged in acquisition as well as commissioning of process computers with AEG company/Berlin and Canadian General Electric/Peterborough/ Ontario. He was then working as scientific adviser with Hoesch Steel/ Dortmund and responsible for planning and installation of process computer systems. Since 1999 he is working as an independent consultant for the steel industry.

Services

Development of adaptive controllers

for processes with dead-time

- Hot-dip galvanizing line (control of zinc coating)

Development of mathematical models

for control and offline-simulation of thermal processes

- Walking beam furnace (control of average slab temperature)
- Coating line (control of strip temperature)
- Roughing stand (estimation of bloom temperature profile)

Parameter estimation of process models

- Gradient search method (nonlinear models)
- Least Squares Estimator (model is linear in the parameters)
- Exponential window (tracking of time varying parameters)

Adaptive controllers and mathematical models are written as software modules in ANSI C language. The modules can be implemented in a standard PC and interfaced with existing computers or PLC's.

Membership

VDEh, Düsseldorf	Verein Deutscher Eisenhüttenleute, VDEh (German Steel Institute)
PEO, Canada	Association of Professional Engineers of Ontario
IEEE, USA	Institute of Electrical and Electronics Engineers