



## F&R staff professional experience brief overview:

Name	Instr.	OLC	CLC	TC	UC	HMI	SYS	Experience [years]	Education
Rehak Antonin	XX	XX				XX		27	MSc. (E.E.)
Filipi Richard	X	X	XX	XX	XX	X		28	MSc. (E.E.)
Podhorny Jiri	X	XX				XX	XX	17	MSc. (E.E.)
Kolar Jan	X	XX	X	XX		XX	X	34	Tech.S.School
Sudrich Martin	XX	XX	X			XX	X	20	Tech.S.School

### Legend to brief overview table:

Instr. = Instrumentation (measurement, actuators – field equipment)

OLC = Open loop control (binary control + protections)

CLC = Closed loop control (regulation)

TC = Turbine control

UC = Unit control (incl. Unit optimization and frequency ctrl.)

HMI = Human machine interface

SYS = System engineering - computer OS+SW+HW, networking, dB applications (SQL language, dB SW Oracle)

Experience = Professional experience till May 2006

Education =

MSc. (E.E.) = Master of Science (Electrical Engineer)

Tech.S.School = Technical Secondary School = Technical College

X = Good

XX = Good – main activity

## Enclosure - Curriculum Vitae of individual persons:

### Legend to Professional Experience:

#### - I&C system Engineering:

I&C system modifications, tuning, optimization of new or already installed systems and various technical support for I&C systems users

#### - I&C System Commissioning:

- System assembly and start up
- Cold tests:
  - System assembly tests
  - Measurement loop tests
  - Actuator loop tests
- Hot tests:
  - Open loop function tests
  - Closed loop function tests and basic tuning
- Unit performance tuning and optimization
- Hot tests:
  - Open loop function tests
  - Closed loop function tests and tuning
- Unit performance tuning and optimization
- Unit switch-off test
- Final unit performance test
- As-built documentation
- Warranty period assistance

<b>Name:</b>	<b>Antonin Rehak</b>	
<b>Date of birth:</b>	30.4.1957	
<b>Sex:</b>	Male	
<b>Nationality:</b>	Czech	
<b>Education Qualification:</b>	MSc. (E.E.) – Technical cybernetics	
	1976-81	Faculty of Electrical Engineering on Czech Technical University in Prague, Czech Republic
<b>Professional Experience:</b>	27 years	
<b>Skoda Praha a.s.</b>	<b>Position held: I&amp;C Commissioning Engineer</b>	
	1981-83	Nuclear power plant Jaslovske Bohunice 4x220 MW, Slovakia: I&C Commissioning (Cold and Hot tests)
	1983-85	Power plant Soma 4x160 MW, Turkey: I&C Commissioning (Cold and Hot tests)
	1985-87	Power plant Prunerov 4x110 MW, Czech Republic: I&C Commissioning (Cold and Hot tests)
	1987-89	Power plant Kafr el Dawar 2x165 MW, Egypt: I&C Commissioning (Cold and Hot tests)
	1990-92	Power Plant Shen-Tau, 2x500 MW, China: I&C Engineering (Basic and Detail design, factory testing - FAT)
<b>F&amp;R, s.r.o.</b>	<b>Position held: I&amp;C Senior Engineer (Engineering and Commiss.) and Managing D.</b>	
	1992	Power plant Bandar Imam, Iraq: I&C Commissioning (Cold and Hot tests)
	1993-94	Power plant Cairo West 2x330 MW, Egypt: I&C Commissioning (Cold and Hot tests)
	1994-98	Power plant Tusimice 4x200 MW, Czech Republic: DCS PROCONTROL P14 + P13 Engineering and Commissioning (Cold, Hot tests, Unit performance tuning and optimization, Unit switch-off test, Final unit performance test, As-built documentation, Warranty period assistance)
	1999-00	Power plant Al Shoaiba Phase II, 5x130 MW + desalination, Saudi: DCS PROCONTROL P14 + P13 Engineering (design modification changes)
	2002	Power plant Florina, 1x300 MW, Greece: DCS PROCONTROL P14 Commissioning (Cold and Hot tests)
	1999-05	Power plant Tusimice 4x200 MW, Czech Republic: DCS PROCONTROL P14 + P13 Engineering / Commissioning Service (Various Design modifications, EDS-P3 system implementation on boiler / turbine protection and turbine control systems, P13 PR03 processor replacement by PR05 on boiler protection, etc.)
	2006-now	Various P14 service activities for Tusimice power plant and Mlada Boleslav (Skoda car factory heating plant)
<b>Training and other Courses:</b>	2001	PROCONTROL P14 - EDS 20 troubleshooting, 4 days, ABB Swiss, Baden (teacher Mr. F. Bachl)
	2002	PROCONTROL P13 – EDS P3 basic training, 4 days, ABB Swiss, Baden (teacher Mr. W. Scheible, Mr F. Bachl)
	2002	ADVANT 160 and 450 basic course, ABB Czech, Brno
<b>Language</b>	English (active), German (beginner)	

<b>Name:</b>	<b>Richard Filipi</b>	
<b>Date of birth:</b>	20.4.1955	
<b>Sex:</b>	Male	
<b>Nationality:</b>	Czech	
<b>Education Qualification:</b>	MSc. (E.E.) – Electronic communication systems	
	1975-80	Faculty of Electrical Engineering on Czech Technical University in Prague, Czech Republic
<b>Professional Experience:</b>	28 years	
<b>Czech Airlines, Prague</b>	<b>Position held: Aircraft electronic control systems Engineer</b>	
	1980-82	Technical support for system trouble shooting and regular maintenance – autopilot system and inertial navigation for the aircraft IL-62
<b>Prague Civil Rehabilitation</b>	<b>Position held: I&amp;C Senior Service Engineer</b>	
	1983-84	I&C rehabilitation – City central heating exchange stations
<b>Skoda Praha a.s.</b>	<b>Position held: I&amp;C Design and Commissioning Engineer</b>	
	1984-85	Nuclear power plant Dukovany 4x220 MW, Czech Republic: I&C Commissioning (Cold and Hot tests)
	1985-87	Power plant Vojany 5x110 MW , Slovakia: - Engineering (Basic Design) - I&C Commissioning (Cold and Hot tests)
	1987-92	Power plant Soma 2x165 MW, Turkey: - Engineering (Basic Design) - I&C Erection and Commissioning supervision (Cold, Hot tests, Unit performance tuning and optimization, Final unit performance test, As-built documentation)
<b>F&amp;R, s.r.o.</b>	<b>Position held: I&amp;C Senior Engineer (Engineering and Commiss.) and Managing D.</b>	
	1992-94	Power plant Ledvice 2x110 MW, Czech Republic: I&C Engineering / Consulting (DCS Westinghouse WDPF II)
	1994-98	Power plant Tusimice 4x200 MW, Czech Republic: DCS PROCONTROL P14 + P13 Engineering and Commissioning (Cold, Hot tests, Unit performance tuning and optimization, Unit switch-off test, Final unit performance test, As-built documentation, Warranty period assistance)
	1999	Power plant Tusimice 4x200 MW, Czech Republic: DCS PROCONTROL P14 + P13 Engineering / Commissioning Service (Turbine ctrl. Turbotrol 5, unit ctrl. Modan, various design modifications, periodical main unit closed loop tuning and optimization to reach combustion emission limits, primary and secondary frequency control certification, unit island operation certification, etc.)
	1999-01	Power plant Al Shoaiba Phase II, 5x130 MW + desalination, Saudi: DCS PROCONTROL P14 + P13 Engineering and Commissioning (design modification changes and update, Commissioning site support for Bechtel)
	2002	Power plant Turceni 7x300 MW, Romania: DCS PROCONTROL P14 + P13 Commissioning (Turbine control Turbotrol 6)
	2002	Power plant Cadafe 3x360 MW, Venezuela: DCS PROCONTROL P13 Commissioning (Turbine control Turbotrol 5)
	2003-05	Power plant Tusimice 4x200 MW, Czech Republic: DCS PROCONTROL P14 + P13 Engineering / Commissioning Service (Turbine ctrl Turbotrol 5, unit ctrl. Modan, various design modifications, EDS-P3 system implementation on boiler / turbine protection and turbine control systems, P13 PR03 processor replacement by PR05 on boiler protection, periodical main unit closed loop tuning and optimization to reach combustion emission limits, primary and secondary frequency control certification, unit island operation certification)
	2005-07	Power plant Tutuka 6x609 MW, units 4-6, Tutuka, South Africa DCS Procontrol P14, I&C refurbishment, closed and open loops design at site, commissioning and optimization (whole boiler control with black coal tube mills)
	2007	Extraction turbine 16 MW, Aspropyrgos, HELPE, Greece DCS Procontrol P14, turbine control (Turbotrol 6) and protection refurbishment design in ABB Mannheim
	2007-08	TWL Ludwigshafen, incineration plant DCS P14, RRA3 refurbishment
	2008	Power plant Bergkamen 1x750 MW, Deutschland, DCS P14, general DCS refurbishment, REA closed loop control, boiler feed water closed loop control, unit control (partly)

	2008	Helenic Petroleum Aspropyrgos (Athen) 1x 20 MW, Greece, DCS P14, turbine control design and commissioning
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<b>Training and other Courses:</b>	2001	PROCONTROL P14 - EDS 20 troubleshooting, 4 days, ABB Swiss, Baden (teacher Mr. F. Bachl)
	2002	PROCONTROL P13 – EDS P3 basic training, 4 days, ABB Swiss, Baden (teacher Mr. W. Scheible, Mr F. Bachl)
<b>Language</b>	English (active)	

<b>Name:</b>	<b>Jiri Podhorny</b>	
<b>Date of birth:</b>	29.1.1968	
<b>Sex:</b>	Male	
<b>Nationality:</b>	Czech	
<b>Education Qualification:</b>	MSc. (E.E.) – Electronic computers	
	1986-91	Faculty of Electronic Computers on Novosibirsk Electro technical Institute (NETI), Novosibirsk, Russia
<b>Professional Experience:</b>	17 years	
<b>CEZ, a.s. Power plant Tusimice 4x200 MW</b>	<b>Position held: I&amp;C systems maintenance engineer</b>	
	1991-94	Power plant LAN system implementation (Novell, TCP-IP)
	1995-00	DCS system maintenance: - ABB - Procontrol P14 + P13 (Main unit control system) - Valmet – Damatic DX (Coal handling control system) - ABB - Micro SCADA (Electrical part control system)
<b>F&amp;R, s.r.o.</b>	<b>Position held: I&amp;C Design and Commissioning Engineer</b>	
	2001	Various Power plants, Czech Republic: I&C consulting and engineering support
	2001	Nuclear power plant Oskarshamn, Westinghouse Mannheim, DCS ADVANT AC160
	2001-02	Nuclear power plant for Ulchin(South Korea), Westinghouse USA (Windsor): DCS ADVANT AC160 Engineering and factory testing
	2001-03	Core Protection Calculator for Nuclear Power Plant Palo Verde (Arizona), Westinghouse USA (Windsor). V&V ADVANT AC160 CommonQ System.
	2003	Power plant Tusimice 4x200 MW, Czech rep., DCS PROCONTROL P14 and P13- QT communication (EDS P3 and EDS 20), new QT address list generation program.
	2004-05	HMI Berlin (nuclear research reactor), Germany: DCS Advant AC160 Engineering (I&C training model – Feed Water control)
	2004-05	VEK Karlsruhe, Germany: DCS Advant AC70 Engineering (Mosaic control panel communication to the DCS)
	2004	Nuclear power plant Oskarshamn, Sweden: DCS ADVANT AC160 Engineering and Commissioning (System modifications and maintenance service)
	2004-05	HMI Berlin (nuclear research reactor), Germany: DCS Advant AC160 Engineering, Field Test and Commissioning.
	2005-06	Power plant Tutuka 6x609 MW, units 4+5, Tutuka, South Africa DCS Procontrol P14, I&C refurbishment, open loops design at site, P14 system installation, P14 system support and commissioning
	2006-07	Nuclear power plant Ling Ao, China, Teleperm XP (Siemens), supervision of China local engineering works in Erlangen office
	2008-now	TWL Ludwigshafen, incineration plant, DCS P14, RRA3 refurbishment
<b>Training and other Courses:</b>	1995	Procontrol P14 (EDS, POS, PMS, PDAG, CDS) - 12 weeks, Germany, Mannheim
	1996	VMS, Unix oper.systems – 4 weeks, Czech Republic, Ceske Budejovice
	1997	Damatic XD – 4 weeks, Austria, Vienna
	1998	Damatic XD – 2 weeks, Finland, Tampere
	1999	Micro SCADA – 2 weeks, Finland, Vassa
	2008	C / C++ 2 weeks basic and advanced courses, Prague
<b>Language</b>	English (active), Russian (good)	

<b>Name:</b>	<b>Jan Kolar</b>	
<b>Date of birth:</b>	4.1.1953	
<b>Sex:</b>	Male	
<b>Nationality:</b>	Czech	
<b>Education Qualification:</b>	Technical Secondary School – Computer and Process Control Systems	
	1968-73	Secondary electro technical school - Computer Systems
	1982-86	Secondary electro technical school - Process Control Systems
<b>Professional Experience:</b>	34 years	
<b>CEZ, a.s. Power plant Tusimice 4x200 MW</b>	<b>Position held: I&amp;C maintenance specialist – (later foreman)</b>	
	1974-86	I&C maintenance
<b>Skoda Praha a.s.</b>	<b>Position held: I&amp;C Commissioning Engineer</b>	
	1987-88	Power plant Prunerov 4x110 MW, Czech Republic: I&C Commissioning – I&C retrofit
	1989-90	Power plant Abu Dhabi, Um Al Nar West 2x165 MW, United Arab Emirates: I&C Commissioning of ABB control system Decontic and Decontrol
	1990-92	Power plant Neuvitas 3x160 MW, Cuba: I&C Commissioning – new power plant
	1992-93	Power plant Prunerov 4x110 MW, Czech: I&C Commissioning – I&C retrofit
	1993-94	Power plant Rossario 2x160 MW, Argentina: I&C Engineering service (manpower service via Skodaexport company)
	1994-96	Power plant Felton 2x250 MW, Cuba: I&C Commissioning – new power plant
	1996-97	FGD plant of power plant Novaky, Slovakia: I&C Commissioning – new FGD plant
	<b>F&amp;R, s.r.o.</b>	<b>Position held: I&amp;C Design and Commissioning Engineer</b>
1997-98		Power plant Tusimice 4x200 MW, Czech Republic: DCS PROCONTROL P14 + P13 Engineering (+design modifications) Various power plants, Czech Republic: I&C Engineering and Commissioning service
1998-99		Power and heating plant in VW car factory M.Boleslav, Czech Republic: DCS Procontrol P14 Commissioning (Closed loop control)
2000-02		Power plant Al Shoaiba Phase II, 5x130 MW + desalination, Saudi: DCS Procontrol P14 + P13 Engineering and Commissioning (design modification changes and update, Commissioning site support for Bechtel)
2002-03		Power plant La Rosita 1x120/165 MW combine cycle, Mexico: Design works in Paris and Belford for Alstom Power, commissioning on site, DCS ALSTOM P320-TGC
2003		Power plant Florina 1x330 MW, Greece: DCS Procontrol P14 Commissioning
2004		Power plant Tusimice 4x200 MW, Czech Republic: DCS Procontrol P14 + P13 Engineering / Commissioning, EDS-P3 system implementation on boiler / turbine protection and turbine control systems, P13 PR03 processor replacement by PR05 on boiler protection, etc.)
2005		Power plant NAGA 2x57 MW, unit 2, Cebu, Philippines Turbine control re-commissioning and tuning, DCS Procontrol P13
2005-06		Power plant 6x57 MW, Desalination and common part, Misurata, Libya P14 HMI system commissioning
2006-07		Power plant Tobruk, Libya P14 system commissioning
2007-08		Power plant Tutuka 6x609 MW, units 4-6, Tutuka, South Africa DCS Procontrol P14, I&C service works after refurbishment (EDS, POS) for ABB South Africa
2008		Power Plant Kirklees, England, turbine control (Turbotrol6) design, DCS Melody-Symphony
2008		Power plant Arnot, South Africa, DCS Procontrol P14, service support
<b>Training and other Courses:</b>		1996
	2002	ADVANT 160 and 450 basic course, ABB Czech, Brno
	2002	ALSTOM turbine control training, 2 month, Mannheim and Paris
<b>Language</b>	English (active), Spanish (active)	



<b>Name:</b>	<b>Martin Sudrich</b>	
<b>Date of birth:</b>	14.3.1970	
<b>Sex:</b>	Male	
<b>Nationality:</b>	Czech	
<b>Education Qualification:</b>	Technical Secondary School	
	1984-88	Secondary electro technical school – Measurement and Process Control Systems
<b>Professional Experience:</b>	20 years	
<b>The First Brno machinery</b>	<b>Position held: I&amp;C Design and Commissioning Engineer</b>	
	1988-92	Turbine and gas boiler control
<b>ABB Power Plant Control s.r.o.</b>	<b>Position held: I&amp;C Design and Commissioning Engineer</b>	
	1993-97	Power plant Tusimice 4x200 MW, Czech Republic: DCS PROCONTROL P14 + P13 Design and Commissioning (Burner management system incl. Burner protections)
	1997-98	Heat recovery boiler (gas turbine plant), Aktubinsk –Russia: DCS PROCONTROL P Design and Commissioning
	1998-99	Power and heating plant boiler 2x140 t/h (fluid) TG 2x50MW in VW car factory M.Boleslav, Czech Republic: DCS Procontrol P14 Design and Commissioning (whole system)
	1999-00	Paper factory ASDO Ospap Steti, chemical recovery boiler 220 t/h, Czech Republic: ABB Advant AC450 Design and Commissioning (whole system)
	2000	Power plant Banjarmasin, Indonesia: DCS system ABB Advant AC450 with EDB, Design, Commissioning (whole system including training of the client staff)
	2001	Cement factory, material transport control, Cementarny Mokra, Czech Republic Advant AC450 OCS, design and commissioning
<b>BCS Engineering a.s.</b>	<b>Position held: I&amp;C Design and Commissioning Engineer</b>	
	2001-02	Small turbine protections and control (95 – 250 kW), Czech Republic: DCS PLC Micrologix Allen Bradley with HMI – Design and Commissioning
	2002	Chemical cleaning system for waste gases, KORAMO (chemical factory), Kolin, Czech Republic
<b>F&amp;R, s.r.o.</b>	<b>Position held: I&amp;C Design and Commissioning Engineer</b>	
	2002-05	Power plant Florina 1x330 MW, Greece: DCS Procontrol P14 (ABB UTA site manager from 11.8. 03) I&C Engineering / Commissioning (new power plant)
	2005-06	Power plant Tutuka 6x609 MW, Tutuka, South Africa DCS Procontrol P14, I&C refurbishment, P14 commissioning and system support
	2006-07	Nuclear power plant Ling Ao, China, Teleperm XP (Siemens), supervision of China local engineering works in Erlangen office
	2008	TWL Ludwigshafen, incineration plant, DCS P14, RRA3 refurbishment
	2008	Power plant Bergkamen 1x750 MW, Deutschland, DCS P14, general DCS refurbishment, design and commissioning of closed loops and binary control (HP bypass, coal flow, feed water and unit control - partly)
<b>Training and other Courses:</b>	1993	PROCONTROL P14 - EDS 20, POS30, ABB Mannheim, Germany
	1999	Advant system AC450, ABB Mannheim
<b>Language</b>	English (active), Russian (basic), German (beginner)	