

Introduction of CONWELL



2023



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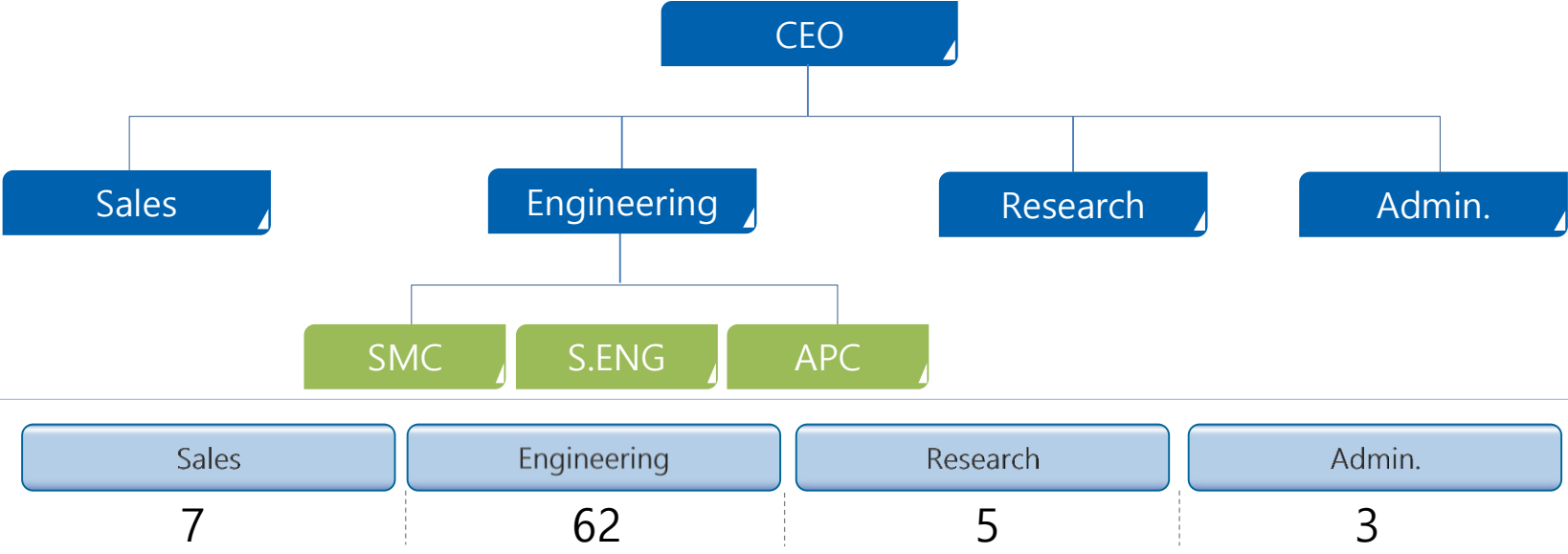
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II. Partnership Solutions

CONWELL – OT Solution Provider

“Over 29 years Know-How” expertise
company in factory automation,
process control & MES



- H/Q : R-608 , 9-22 Pangyo-ro 255 beon-gil , Sungnam, Korea
- Branch : R-806, 282 Hakeui-ro, Anyang, Korea
- Factory : R-1207, 282 Hakeui-ro, Anyang, Korea

Global Authorized Business Partner



Business Sector

Smart Factory - MES System

- c-MES
- Siemens OP Center
- Digital Twin Solutions
- RFID, Steel Barcode
- SMART IoT, Cloud

Big Data & Analytics/ APC

- Quality predictive monitoring based on data mining
- Multi-variable model predictive control (MPC)
- Predictive maintenance based on AI

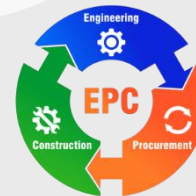
OT Total
Solution
Provider

- ICT based Consulting & Design Service
- BPMS (Batch Production Management System)
- PLC, SCADA, DCS, RTDB
- Instrument

- EPC Design for Electricity & Instrumentation for Chemicals, Petrochemicals, Power plants, Industrial plants

Smart Factory - Automation

I&C Design for EPC



2. Business Area

I. Introduction of CONWELL

[Industry Field]

Chemicals



Oil & Gas



Power & Utility



Automobile



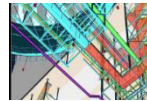
Pharmacy, Food & Beverage



[Business Area]

I&C Design for EPC

Detail Design



System Design



Power Plant

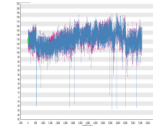


System Integration & Data Mining

Data Mining
(Data Analysis & Consulting)



RTDB



Automation & MES

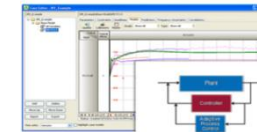
SCADA/PLC



DCS



APC



MES



Data Mining : c-PCA

RTDB (Real Time Database) : Historian

SCADA System : WinCC, WinCC OA

DCS (Distributed Control System) : SIEMENS PCS-7

APC (Advanced Process Control) : MPC

MES (Manufacturing Execution System) : Siemens OP Center

3. Business partnership and Customers

I. Introduction of CONWELL

[Authorized Business Partner]

SIEMENS

[Customers]



Registered Patent

- Patent 1**
- Patent 10-2467329,
 - Dry type carbon dioxide capture equipment using a plate heat exchanger and dry type carbon dioxide capture process using the same

Registered Program

- Ⓒ BPMS : Batch Process Management System
(Registered No. : 2002-01-15-1564)
- Ⓒ MSE OPC SERVER : Mitsubishi Ethernet OPC SERVER Program
(Registered No : 2000-01- 24-5208)
- Ⓒ ZCM : Model predictive control program for Ingot Growing Process
(Registered No : C-2022-054018)

6. Project Reference

I. Introduction of CONWELL

MES - Automotive

Industry	Product	Company	Project Name	Year	Region	Remarks
Automotive	PCR	HMGMA	Hyundai Motor Group Meta-plant America paint shop control system	2023~	U.S.A	
Automotive	MES	HMGICs	Group Standard G-MES and WCS	2022	Singapore	
Automotive	MES	HKMC	Group Standard G-MES (Asan & Kwangmyung plant)	2020	Korea	
Automotive	PCR	HMI	HMI #2 plant paint shop PCR system Upgrade	2019	India	
Automotive	Quality	RSM	Renault Tightening Management System (Busan plant)	2019	Korea	
Automotive	Quality	HMI	Hyundai Motors India #1 plant, Tightening Management System	2019	India	
Automotive	PCR	KMI	Kia Motors India plant, paint Shop PCR system (Bangalore)	2018	India	
Automotive	MES	HMI	Hyundai Motors India #2 plant, MES Upgrade (Chennai)	2018	India	
Automotive	MES	MOBIS	Hyundai Mobis Fuel Cell Factory MES System (Choongju)	2017	Korea	
Automotive	MES	MOBIS	Hyundai Mobis Czech plant - Lamp Factory MES System	2015	Czech	
Automotive	PCR	HMC	Hyundai Motors China #4 Paint Shop PCR System (Chanzhou)	2017	China	
Automotive	Quality	KMM	Kia Motors Mexico plant tightening Management System	2015	Mexico	
Automotive	MES	KMC	Kia Motors Mexico plant MES & PCR(Paint) system	2015	Mexico	
Automotive	MES	KMC	Kia Motors China #2 plant MES System	2013	China	
Automotive	MES	HMC	Hyundai Motors Turkey plant MES System	2012	Turkey	
Automotive	MES	HMMR	Hyundai Motors Russia plant G-MES System (Saint Petersburg)	2009	Russia	
Automotive	MES	HMI	Hyundai Motors India plant, Engine Equipment Status System (Chennai)	2008	India	
Automotive	MES	HMC	Hyundai Motors #51 plant Assembly MES System	2007	Korea	
Automotive	MES	BHMC	Hyundai Motors China #2 plant MES (Beijing)	2007	China	
Automotive	PCR	HMC	Hyundai Motors #51 plant paint shop PCR system (Ulsan)	2007	Korea	
Automotive	MES	HMI	Hyundai Motors India #1 plant Assembly MES (Chennai)	2007	India	

6. Project Reference

I. Introduction of CONWELL

MES - Pharmaceutical/Food & Beverage/Chemical/Battery

Industry	Product	Company	Project Name	Year	Region	Remarks
Chemical	MES	Yoosung C&F	Wonju plant RTDB & MES system	2023	Korea	
Battery	MES	Solar Edge	Umsung plant MES system	2023	Korea	OP Center
Pharmaceutical	MES	ST PHARM	ST PHARM, BANWOL 올리고동 스마트 고도화MES System	2022	Korea	
Pharmaceutical	RTDB	Samsung Biologics	SBL P4 PI RTDB System & Web Portal	2022	Korea	
Food & Beverage	MES	OB Brewery	Data Integration for MES (Icheon & Kwangju Plant)	2022	Korea	
Food & Beverage	MES	PULMUONE	8 plant Data integration for MES	2022	Korea	
Food & Beverage	MES	OB Brewery	Data Integration for MES (Icheon & Kwangju Plant)	2022	Korea	
Food & Beverage	MES	PULMUONE	8 plant Data integration for MES	2022	Korea	
Pharmaceutical	RTDB	Samsung Biologics	SBL P3 PI RTDB System & Web Portal	2018	Korea	

6. Project Reference

I. Introduction of CONWELL

Automation – Chemical/Mining/Food & Beverage

Industry	Product	Company	Project Name	Year	Region	Remarks
Chemical	PLC	POSCO	POSCO #2 Plant LiOH Control System	2022	Korea	
Chemical	PLC & SCADA	UmiCore	UmiCore #1 Plant SCADA Migration	2022	Korea	
Chemical	DCS	Daystar	Daystar TMI SEMI WORK DCS Project	2015	Korea	PCS-7
Chemical	PLC & SCADA	Dow Corning	Dow Corning Batch Reactor NGSP2 Project	2015	Korea	
Chemical	DCS	Daystar	Daystar II III TMG S&D DCS Project	2014	Korea	PCS-7
Mining	PLC & SCADA	HANWHA E&C	HANWHA E&C, Ad Duwayhi Gold Project	2013	Saudi Arabia	
Chemical	DCS	Dow Corning	Dow Corning Batch Reactor Project	2013	Korea	PCS-7
Chemical	DCS	Daystar	DAYSTAR, TEG DCS&ESD Project	2012	Korea	PCS-7
Chemical	DCS	Dow Corning	Batch Reactor Project –PCS7	2012	Korea	PCS-7
Chemical	DCS	DOOSAN	Madagascar Ambatoby, Amonia storage system	2009	Madagascar	PCS-7
Chemical	PLC & SCADA	Dongwoo Finechem	Pyeongtaek , PTP2-12 HRMF Control System	2009	Korea	
Food & Beverage	PLC & SCADA	PULMUONE	Sprout System Upgrade	2009	Korea	
Food & Beverage	PLC & SCADA	LOTTE Milk	Milk Process System	2008	Korea	
Food & Beverage	PLC & SCADA	PULMUONE	Sprout System Upgrade	2007	Korea	
Chemical	PLC & SCADA	Chhoogoku paint	Solvent Process	2007	Korea	
Chemical	PLC & SCADA	Dongwoo Finechem	Pyeongtaek , RGB Control System	2007	Korea	

6. Project Reference

I. Introduction of CONWELL

Automation – Chemical/Mining/Food & Beverage

Industry	Product	Company	Project Name	Year	Region	Remarks
Food & Beverage	PLC & SCADA	Pasteur Milk	Milk Production System	2006	Korea	
Chemical	PLC & SCADA	DuPont	Ulsan, 2nd Line Control System	2006	Korea	
Chemical	PLC & SCADA	Hyo Sung	G-Project(Distillation) Control System	2006	Korea	
Food & Beverage	PLC & SCADA	PULMUONE	Sprout System	2005	Korea	
Chemical	PLC & SCADA	RHODIA	Incheon, Furnace 이설 Control System	2005	Korea	
Food & Beverage	PLC & SCADA	PULMUONE	1 st MES/POP System	2004	Korea	
Chemical	PLC & SCADA	Samsung Electronics	S-LCD Monitoring System	2004	Korea	
Chemical	PLC & SCADA	DuPont	Ulsan, Line Control System	2004	Korea	
Food & Beverage	PLC & SCADA	(주)DOOSAN CPK	Incheon F/G separate System	2003	Korea	
Chemical	PLC & SCADA	DONGWOO FINE-CHEM	DONGWOO FINE-CHEM, RGB Chemical Plant	2003	Korea	
Chemical	PLC & SCADA	DuPont Korea	DuPont ULSAN, Chemical Plant Project	2003	Korea	
Chemical	PLC & SCADA	DOOSAN Electric	Kumi H.W.P Control System	2003	Korea	
Food & Beverage	PLC & SCADA	JINRO	Icheon Candle Filter System	2002	Korea	
Food & Beverage	PLC & SCADA	OB Brewery	Icheon C/F PR-220 System	2001	Korea	

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II. Smart Factory Solution Partnership

1. SIEMENS

- PCS7 DCS : SIMATIC Batch
- MES : OPCenter

S88 based solution for batch system

Introduction

What is SIMATIC BATCH?

SIMATIC BATCH is a software package for planning, controlling and reporting of batch processes

- Fully integrated in SIMATIC PCS 7 in the ES and OS Systems
- Modular functionality supports many customer use cases
- Scalable, it can be used in small pilot plants as well as in any size of production
- Simple graphical recipe creation and comprehensive batch planning
- Standards-compliant, flexible automation of complex batch processes (ISA-88)

SIMATIC BATCH is used when production processes ...

- ... lead to different products (on the same plant)
- ... can be adapted to new products
- ... will be continuously improved
- ... must be reported and archived
- ... can run on different equipment



SIEMENS
Ingenuity for life



Industries

- Pharmaceuticals
- Chemical / Mineral Fibers
- Food and Beverage
- Biotechnology
- Coatings / Paints
- Fertilizer and Pesticides
- Detergents / Cleaning Products
- Plastics / Adhesives

MES Solution

Opcenter <



Opcenter is a holistic Manufacturing Operations Management (MOM) solution that enables you to implement your strategy for the complete digitalization of manufacturing operations. Opcenter provides end-to-end visibility into production, allowing decision-makers to readily identify areas to be improved within both the product design and associated manufacturing processes, and make the necessary operational adjustments for smoother and more efficient production.

Opcenter's technologies and architecture adapt to the specific requirements of different industrial processes. It provides comprehensive MOM applications with a rich ecosystem of industry-specific functionalities developed from deep expertise in manufacturing. The highly scalable platform delivers multiple capabilities and enables customers to combine production efficiency with quality and visibility to reduce time to production.

Opcenter provides solutions for:

- Advanced Planning and Scheduling
- Manufacturing Execution
- Quality Management
- Manufacturing Intelligence and Performance
- Research, Development and Laboratory

Thank you.

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