

SIEMENS

KKS

**Kraftwerk-
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System**

Attention: For decoding purposes only

Abridged version for Fossil-Fueled Power Plants
Edition 1995

KKS Identification System for Power Plants

Abridged version for Fossil-Fueled Power Plants

- Function Key
- Equipment Unit Key
- Component Key

Important notice:

This abridged version contains the principal parts of the keys employed for fossil-fueled power plants, but does not include the guidelines, application commentaries, boundaries and task definitions present in the complete edition.

The abridged version is intended to assist the user in decoding documents employing KKS codes and shall not be used as material for work.

The designations used in this edition may in certain cases deviate slightly from the VGB edition (preferred KWU terms).

Information on general subjects is provided by KWU OI 42, Offenbach, Tel. 2078.

KKS Identification System for Power Plants

Format of the KKS

In consideration of the various requirements placed on the identification of plants, sections of plants and items of equipment in power stations, KKS has three different types of code:

- Process-related code**
 Process-related identification of systems and items of equipment according to their functions in mechanical, civil, electrical and control and instrumentation engineering
- Point of installation code**
 Identification of points of installation of electrical and control and instrumentation devices in installation units (e.g. in cabinets, panels, consoles)
- Location code**
 Identification of locations in structures, on floors and in rooms and also of fire areas and topographical determinations (surface area grid).

These three types of code use the same identification scheme, which is subdivided into four breakdown levels and titled as follows:

Breakdown level	0	1	2	3
Process-related identification	Total plant	System code	Equipment unit code	Component code
Point of installation identification	Total plant	Installation unit code	Installation space code	
Location identification	Total plant	Structure code	Room code	

The individual breakdown levels are made up of classifying and numbering code elements which consist of data characters occupied by alpha and numeric symbols:

Breakdown level	0	1	2	3
Designation	G	F ₀ F ₁ F ₂ F ₃ F _N	A ₁ A ₂ A _N A ₃	B ₁ B ₂ B _N
Data character	A or N	N AAA NN	AA NNN A	A A N N

The following extract from the keys contains the most important classifying parts of the function, equipment unit and component keys used in fossil-fueled power plants.

The numerical data characters of the identifier are normally not classifying and are employed on a plant and user-specific basis ("Project-specific establishments according to the KKS Guidelines").

Function Key, Main Groups

A	Grid and distribution systems
B	Power transmission and auxiliary power supply
C	Instrumentation and control equipment
E	Conventional fuel supply and residues disposal
G	Water supply and disposal
H	Conventional heat generation
L	Steam, water, gas cycles
M	Main machine sets
N	Process energy supply for external users (e.g. district heating)
P	Cooling water systems
Q	Auxiliary systems
S	Ancillary systems
U	Structures
X	Heavy machinery (not main machine sets)

A	Grid and distribution systems > 420 kV systems
AB	> 420 kV systems
AC	380 (420) kV systems
AD	220 (245) kV systems
AE	110 (150) kV systems
AF	60 (72) kV systems
AG	45 (50) kV systems
AH	30 (35) kV systems
AJ	20 (25) kV systems
AK	10 (15) kV systems
AL	6 (5) kV systems
AM	1-3 kV systems
AN	< 1 kV systems
AP	Control consoles
AQ	Measuring and metering equipment
AR	Protection equipment
AS	Decentralized panels and cabinets
AT	Transformer equipment
AU	Open-loop control, checkback and auxiliary equipment
AV	Marshalling racks
AW	Instrument panels
AX	Central equipment
AY	Communication equipment

B Power transmission and auxiliary power supply

BA	Power transmission
BAA	Generator leads
BAB	Foundation cabinets
BAC	Generator circuit breaker, also commutating pole circuit breaker, incl. cooling system
BAT	Generator transformers, including cooling system
BAW	Earthing and lightning protection systems
BAX	Control air supply system
BAY	Control and protection equipment
BB	Medium-voltage distribution boards and transformers, normal system
BBA-BBS	MV distribution board
BBT	MV auxiliary power transformers
BBX	Fluid supply system for control and protection equipment
BBY	Control and protection equipment
BC	Medium-voltage distribution boards and transformers, general-purpose
BCA-BCS	MV start-up distribution board
BCT	Start-up, offsite, general-purpose transformers
BCX	Fluid supply system for control and protection equipment
BCY	Control and protection equipment
BD	Medium-voltage emergency distribution boards and transformers, (diesel) emergency power system 1
BDA-BDS	MV emergency distribution board
BDT	MV transformer
BDX	Fluid supply system for control and protection equipment
BDY	Control and protection equipment
BF	Low-voltage main distribution boards and transformers, normal system
BFA-BFS	LV main distribution board
BFT-BFW	LV auxiliary power transformer
BFY	Control and protection equipment
BH	Low-voltage main distribution boards and transformers, general-purpose
BHA-BHS	LV main distribution board
BHT-BHW	LV auxiliary power transformer
BHY	Control and protection equipment
BJ	Low-voltage sub-distribution boards and transformers, normal system
BJA-BJS	LV sub-distribution board
BJT	LV auxiliary power transformer
BJY	Control and protection equipment

BL	Low-voltage sub-distribution boards and transformers, general-purpose
BLA-BLS	LV sub-distribution board
BLT	LV auxiliary power transformer
BLY	Control and protection equipment
BM	Low-voltage distribution boards and transformers, (diesel) emergency power system 1
BMA-BMS	LV emergency distribution board
BMT-BMW	LV auxiliary power transformer
BMY	Control and protection equipment
BP	Power installations for variable speed drives
BR	Low-voltage distribution boards, uninterruptible (converter) Power supply
BRA-BRS	LV distribution boards
BRT	Converter (rotary)
BRU	Converter (static) inverter
BRV	Emergency power generating equipment if not under *X* = Heavy Machinery)
BRY	Control and protection equipment
BT	Battery systems
BTA-BTK	Batteries
BTL-BTV	Rectifiers, battery chargers
BTW-BTZ	Common equipment
BU	DC distribution boards, normal system
BUA-BUS	DC distribution board
BUY	Control and protection equipment
BV	DC distribution boards, emergency power system 1
BVA-BVS	DC distribution board
BVY	Control and protection equipment
BX	Fluid supply system for control and protection equipment
BXY	Control and protection equipment
BY	Control and protection equipment

C	Instrumentation and control equipment
CA	Protective interlocks
CAA-CAQ	Cabinets for protective interlocks
CB	Functional group control, subloop control
CBA-CBN	Cabinets for functional group control
CBP	Cabinets for synchronization
CBQ	Cabinets for auxiliary power changeover
CC	Binary signal conditioning, drive control interface
CCA-CCQ	Cabinets for binary signal conditioning, drive control interface
CD	Drive control interface
CDA-CDQ	Cabinets for drive control interface
CE	Annunciation
CEA-CEH	Cabinets for annunciation systems
CEJ-CEQ	Fault recording
CF	Measurement recording
CFA-CFF	Cabinets for measurement
CFQ	Cabinets for recording (meters, pain recorders)
CG	Closed-loop control (excl. power section)
CGA-CGH	Cabinets for closed-loop control
CH	Protection
CHA-CHD	Cabinets for generator and transformer protection
CJ	Unit coordination level
CJA	Unit control system (including cabinets)
CJD	Start-up control, set point control (unit) (incl. cabinets)
CJF	Boiler control system (incl. cabinets)
CJJ-CJN	Instrumentation and control cabinets for steam turbine set
CJP-CJT	Instrumentation and control cabinets for gas turbine set
CJU-CJY	Instrumentation and control cabinets for other main and heavy machinery
CK	Process computer system
CKA-CKH	Online supervisory and diagnostic computer
CKJ-CKM	Access control computer

CR	Programmable process control systems and associated cabinets
CRA	Cabinets for automation systems, e.g. unit control level, function unit 1
CRB	Cabinets for automation systems, function unit 2
CRC	Cabinets for automation systems, function unit 3
CRD	Cabinets for automation systems, function unit 4
CRE	Cabinets for automation systems, function unit 5
CRF	Cabinets for automation systems, function unit 6
CRG	Cabinets for automation systems, function unit 7
CRK	Cabinets for automation systems, e.g. several function units
CRN	Automation systems, e.g. operational
CRP	Automation systems, e.g. fail-safe
CRQ	Automation systems, e.g. AS620-T
CRR	Communications systems, e.g. terminal bus system
CRS	Communications systems, e.g. plant bus system
CRT	Communications systems, e.g. field bus system
CRU	Process control and information system, e. g. OM650
CRV	Configuring system, e.g. E5680
CRW	Diagnostics system, e.g. D5670
CRY	Common super ordinate systems
CU	Closed-loop control (power section)
CUA	Cabinets for power adjuster 400V AC, e.g. function unit 1
CUB	Cabinets for power adjuster 400V AC, e.g. function unit 2
CUC	Cabinets for power adjuster 400V AC, e.g. function unit 3
CUD	Cabinets for power adjuster 400V AC, e.g. function unit 4
CUE	Cabinets for power adjuster 400V AC, e.g. function unit 5
CUF	Cabinets for power adjuster 400V AC, e.g. function unit 6
CUG	Cabinets for power adjuster 400V AC, e.g. function unit 7
CUL	Cabinets for interposing relays for 24 V DC solenoid valves
CUM	Cabinets for power supply of hardwired control room
CUN	Cabinets for 24 V DC fuses
CUP	Cabinets for 230 V DC fuses
CV	Marshalling racks

CW	Control rooms
CWA-CWE	Main control consoles
CWF-CWP	Main control panels
CX	Local control stations
CY	Communication equipment
CYA	Telephone system (PABX)
CYB	Control console telephone system
CYC	Alarm system
CYE	Fire alarm system
CYF	Clock system
CYG	Remote control system
CYH	Telemetry system
CYJ	Remote metering system
CYK	HF carrier telephone system
CYL	Staff paging system
CYP	Optical monitoring system
CYR	Pneumatic tube conveyor
CYS	Radiotelephone system
CYY	Telephone system for commissioning

E	Conventional fuel supply and residues disposal
EA	Unloading and storage of solid fuels
EAA	Ship unloading system
EAB	Rail wagon anti truck unloading bay
EAC	Transport system
EAD	Stacking system
EAE	Bunker system, storage area (stockyard)
EAF	Bucket Wheel system, reclaimer system
EAT	Weighing equipment
EAU	Sampling equipment
EAY	Control and protection equipment
EB	Mechanical treatment of solid fuels (also for gas generation and treatment) (Crushing, mixing drying etc.)
EBA	Transport system
EBB	Mixing system
EBC	Crushing system, pulverizing system
EBD	Screening system
EBE	Separator system and discharge equipment thereof
EBF	Temporary storage system for milled raw coal
EBG	Predrying system
EBH	Main drying system
EBJ	Dried coal transport system incl. aftercooling
EBK	Dried coal temporary storage system
EBL	Vapour compressors system
EBM	Exhaust system
EBR	Residues removal system
EBT	Weighing equipment
EBU	Sampling equipment
EBY	Control and protection equipment
EC	Distribution of solid fuels
ECT	Weighing equipment
ECU	Sampling equipment
ECY	Control and protection equipment
ED	Chemical treatment of solid fuels incl. residues removal (e.g. desulfurization plant)
EE	Conversion of solid fuels

EG	Supply of liquid fuels (light fuel oil)
EGA	Receiving equipment incl. pipeline
EGB	Tank farm
EGC	Pump system
EGD	Piping system
EGR	Residues removal system
EGT	Heating medium system
EGX	Fluid supply system for control and protection equipment
EGY	Control and protection equipment
EH	Chemical treatment of liquid fuels incl. residues removal (light and heavy fuel oil)
EHC	Additive dosing system
EHG	Chemical treatment of light fuel oil
EHN	Chemical treatment of heavy fuel oil
EHT	Heating medium system
EHX	Fluid supply system for control and protection equipment
EHY	Control and protection equipment
EK	Supply of gaseous fuels
EKA	Receiving equipment incl. pipeline
EKB	Moisture separation system
EKC	Heating system
EKD	Main reducing station, expansion turbine
EKE	Mechanical cleaning, scrubbing
EKF	Storage system
EKG	Piping system
EKH	Main pressure boosting system
EKR	Residues removal system
EKT	Heating medium system
EKX	Fluid supply system for control and protection equipment
EKY	Control and protection equipment
EL	Chemical treatment of gaseous fuels incl. residues removal
EM	Supply and treatment of fluxing agents
EN	Supply of other fuels (heavy fuel oil or crude oil)
ENA	Receiving equipment incl. pipeline
ENB	Tank farm
ENC	Pump system
END	Piping system
ENR	Residual removal system
ENT	Heating medium system
ENX	Fluid supply system for control and protection equipment
ENY	Control and protection equipment

EP	Treatment of other fuels (physical treatment of light and heavy fuel oil)
EPC	Pumps system
EPG	Physical treatment of light fuel oil
EPN	Physical treatment of heavy fuel oil
EPT	Heating medium system
EPX	Fluid supply system for control and protection equipment
EPY	Control and protection equipment
EQ	Conversion of other fuels
ER	Ignition fuel supply
ERA	Pulverized coal supply system
ERB	Oil supply system
ERC	Gas supply system
ERY	Control and protection equipment
ET	Ash and slag removal system (from excl. removal equipment)
ETA	Wet ash conveying system
ETB	Storage or settling pond for wet ash
ETC	Wet ash dredger
ETD	Conveying system for granulate
ETE	Storage system for granulate
ETG	Conveying system for dry ash
ETH	Storage system for dry ash
ETK	Common conveying system for wet and dry ash
ETL	Common storage system for wet and dry ash
ETM	Settling plant for wet and dry ash
ETN	Forwarding, distribution, recovery and disposal systems for flushing and ash water
ETP	Generation and distribution systems for carrier air
ETX	Fluid supply system for control and protection equipment
ETY	Control and protection equipment

	E
EU	Treatment and transport system for combustion, fuel treatment, fuel conversion, flue gas cleaning, gas generation residues
EUA	Treatment system for fuel treatment residues
EUB	Treatment system for fuel conversion residues
EUC	Treatment system for fuel combustion residues
EUD	Treatment system for flue gas cleaning residues
EUE	Treatment system for gas generation and treatment residues
EUF	Treatment system for fuel treatment residues
EUG	Treatment system for fuel treatment residues
EUH	Treatment system for fuel conversion residues
EUJ	Treatment system for fuel conversion residues
EUK	Treatment system for fuel combustion residues
EUL	Treatment system for fuel combustion residues
EUM	Treatment system for flue gas cleaning residues
EUN	Treatment system for flue gas cleaning residues
EUP	Treatment system for gas generation and treatment residues
EUQ	Treatment system for gas generation and treatment residues

G **Water supply and disposal**

GA	Raw water supply
GAA	Extraction, mechanical cleaning
GAC	Piping and channel system
GAD	Storage system
GAF	Pump system
GAV	Lubricant supply system
GAX	Fluid supply system for control and protection equipment
GAY	Control and protection equipment
GB	Treatment system (carbonate hardness removal) incl. cooling tower make-up water treatment system
GBB	Filtering, mechanical cleaning system
GBC	Aeration, gas injection system
GBD	Precipitation system (e.g. for carbonate hardness removal)
GBE	Acid proportioning system (e.g. for carbonate hardness removal)
GBF	Ion exchange, reverse osmosis system (e.g. for carbonate hardness removal)
GBG	Evaporation system (e.g. for carbonate hardness removal)
GBH	Deaeration, drying system
GBJ	Preheating, cooling system
GBK	Piping system temporary storage system, pump system for main fluid
GBL	Storage system outside fluid treatment system (if not part of another system)
GBN	Chemicals supply system
GBP	Regeneration flushing equipment
GBQ	Injection system for main fluid (for hardness stabilisation)
GBR	Flushing water and residues removal system incl. neutralization
GBS	Sludge thickening system
GBT	Heating, cooling and flushing fluid distribution system
GBX	Fluid supply system for control and protection equipment
GBY	Control and protection equipment

GC	Treatment system (demineralization)
GCB	Filtering, mechanical cleaning system
GCC	Aeration, gas injection system
GCD	Precipitation system (e.g. for carbonate hardness removal)
GCE	Acid proportioning system (e.g. for carbonate hardness removal)
GCF	Ion exchange, reverse osmosis system (e.g. for demineralization)
GCG	Evaporation system (e.g. for demineralization)
GCH	Deaeration drying system
G CJ	Preheating, cooling system
GCK	Piping system, temporary storage system, pump stem for main fluid.
GCL	Storage system outside fluid treatment system (if not part of another system)
GCN	Chemicals supply system
GCP	Regeneration, flushing equipment
GCQ	Injection system for main fluid
GCR	Flushing water and residues removal system incl. neutralization
GCS	Sludge thickening system
GCT	Heating, cooling and flushing fluid distribution system
G CX	Fluid supply system for control and protection equipment
G CY	Control and protection equipment
GD	Treatment system (others)
GDB	Filtering, mechanical cleaning system
GDC	Aeration, gas injection system
GDD	Precipitation system (e.g. for carbonate hardness removal)
GDE	Acid proportioning system (e.g. for carbonate hardness removal)
GDF	Ion exchange, reverse osmosis system (e.g. for demineralization)
G DG	Evaporation system (e.g. for demineralization)
GDH	Deaeration, drying system
GDJ	Preheating, cooling, system
GDK	Piping system, temporary storage system,, pump system for main fluid
GDL	Storage system outside fluid treatment system (if not part of another system)
GDN	Chemicals supply system
GDP	Regeneration, flushing equipment
GDQ	Injection system for main fluid
GDR	Flashing water and residues removal system incl. neutralization
GDS	Sludge thickening system
GDT	Heating, cooling and flushing fluid distribution system
G DX	Fluid supply system for control and protection equipment
G DY	Control and protection equipment

GH	Distribution systems (not drinking water)
GHB	Distribution system after treatment (carbonate hardness removal)
GHC	Distribution system after treatment (demineralization), (demineralized water distribution system)
GHD	Distribution system after treatment (others) (mains water distribution system)
GK	Drinking water supply
GKA	Receiving point
GKB	Storage, forwarding, distribution system
GKC-GKZ	Assigned to structures
GM	Plant drainage system
GMA	Central disposal system
GMC-GMZ	Assigned to structures
GN	Plant drains treatment system
GNB	Filtering, mechanical cleaning system
GNC	Aeration, gas injection system
GND	Precipitation system (e.g. for carbonate hardness removal)
GNE	Acid proportioning system (e.g. for carbonate hardness removal)
GNF	Ion exchange system (e.g. for demineralization)
GNG	Evaporation system (e.g. for demineralization)
GNH	Deaeration, drying system
GNJ	Preheating, cooling system
GNK	Piping system, temporary storage system, pump system for main fluid
GNL	Storage system outside fluid treatment (if not part of another system)
GNN	Chemicals supply system
GNP	Regeneration, flushing equipment
GNQ	Injection system for main fluid
GNR	Flushing water and residues removal system incl. neutralization
GNS	Sludge thickening system
GNT	Heating, cooling and flushing fluid distribution system
GNX	Fluid supply system for control and protection equipment
GNY	Control and protection equipment
GQ	Domestic waste water collection and drainage systems
GQA	Central disposal system
GQB	Storage
GQC-GQZ	Assigned to structures

GR	Domestic waste water treatment system
GRB	Filtering, mechanical cleaning system
GRC	Aeration, gas injection system
GRD	Precipitation system (e.g. for carbonate hardness removal)
GRE	Acid proportioning system (e.g. for carbonate hardness removal)
GRF	Ion exchange system (e.g. for demineralization)
GRG	Evaporation system (e.g. for demineralization)
GRH	Deaeration, drying system
GRJ	Preheating, cooling system
GRK	Piping system, temporary storage system, pump system for main fluid
GRL	Storage system outside fluid treatment system (if not a part of another system)
GRN	Chemical supply system
GRP	Regeneration, flushing equipment
GRQ	Injection system for main fluid
GRR	Flushing water and residues removal system incl. neutralization
GRS	Sludge thickening system
GRT	Heating, cooling and flushing fluid distribution system
GRX	Fluid supply system for control and protection equipment
GRY	Control and protection equipment
GT	Water recovery from waste water
GU	Rainwater collection and drainage systems incl. treatment system
GUA	Central disposal system
GUB	Storage
GUC-GUZ	Assigned to structures

H Conventional heat generation

HA	Pressure system, feedwater and steam sections
HAA	LP part-flow feed heating system (flue-gas-heated)
HAB	HP part-flow feed heating system (flue-gas-heated)
HAC	Economizer system
HAD	Evaporator system
HAG	Circulation system (not used in natural-circulation boiler)
HAH	HP superheater system
HAJ	Reheat system
HAK	Secondary reheat system
HAM	Triflux system
HAN	Pressure system drainage and venting systems
HAX	Fluid system for control and protection equipment
HAY	Control and protection equipment
HB	Support structure, enclosure, steam generator interior
HBA	Frame incl. foundations
HBB	Enclosures
HBC	Brick linings incl. insulating brickwork
HBD	Platforms, stairways
HBE	Pressure vessel (supercharged boiler)
HBK	Steam generator interior
HC	Fireside heat transfer surface cleaning equipment
HCA	Air sootblowing system
HCB	Steam sootblowing system
HCC	Water sootblowing system
HCD	Flushing equipment system
HCE	Rapping gear
HCF	Shot cleaning system
HCW	Sealing fluid supply system
HCY	Control and protection equipment
HD	Ash and slag removal, particulate removal.
HDA	Furnace ash removal, furnace slag removal, bed ash removal
HDB	Bed ash return system
HDC	Flue dust discharge and return system
HDD	Mechanical dust handling system
HDE	Electrostatic precipitator
HDF	Cyclone dust removal and return system
HDT	Fluid supply system for ash, slag and dust moistening
HDU	Carrier air supply
HDW	Sealing fluid supply system
HDY	Control and protection equipment

HF	Bunker, feeder and pulverizing system
HFA	Bunker for pulverizing system
HFB	Feeder system
HFC	Pulverizing system (incl. classifier)
HFD	Flue gas return system
HFE	Mill air system, carrier air system
HFF	Vapour/exhaust gas system
HFG	Pulverized coal temporary storage bunker after central pulverizing system (indirect firing)
HFW	Sealing fluid supply system
HFY	Control and protection equipment
HH	Main firing system (electric-powered as well)
HHA	Main burners
HHB	Retarded combustion grate
HHC	Grate combustion system
HHD	Other burner equipment (e.g. vapour burner, flue dust burner)
HHE	Pulverized coal bin, forwarding and distribution system
HHF	Oil temporary stage, pump and distribution system
HHG	Gas pressure reduction, distribution, system
HHH	Temporary storage, forwarding and distribution system for other fuels fluid 1
HHJ	Temporary storage, forwarding and distribution system for other fuels fluid 2
HHK	Temporary storage, forwarding and distribution system for other fuels fluid 3
HHL	Combustion air supply system
HHM	Atomizer medium supply system (steam)
HHN	Atomizer medium supply system (air)
HHP	Coolant supply system (steam)
HHQ	Coolant supply system (air)
HHR	Purging medium supply system (steam)
HHS	Purging medium supply system (air)
HHT	Heating medium supply system (steam)
HHU	Heating medium supply system (hot water)
HHV	Electric heating system
HHX	Fluid supply system for control and protection equipment
HHY	Control and protection equipment

HJ	Ignition firing equipment (if separate)
HJA	Ignition burners
HJE	Pulverized coal bin, forwarding and distribution system
HJF	Oil temporary storage, pump and distribution system
HJG	Gas pressure reduction, distribution system
HJL	Combustion air supply system
HJM	Atomizer medium supply system (steam)
HJN	Atomizer medium supply system (air)
HJP	Cooling supply system (steam)
HJQ	Cooling supply system (air)
HJR	Purging medium supply system (steam)
HJS	Purging medium supply system (air)
HJT	Heating medium supply system (steam)
HJU	Heating medium supply system (hot water)
HJX	Fluid supply system for control and protection equipment
HJY	Control and protection equipmented
HL	Combustion air system (primary air, secondary air)
HLA	Ducting system
HLB	Fan system, forced-draught fan system
HLC	External air heating system (not flue-gas-heated)
HLD	Air heating system (flue-gas-heated)
HLU	Air pressure relief system
HLY	Control and protection equipment
HM	Gas heating system (for closed cycle)
HMA	Primary heater (primary convection section)
HMB	Radiation section
HMC	Secondary heater (second convection section)
HMD	Reheat system
HMY	Control and protection equipment
HN	Flue gas exhaust (without flue gas treatment)
HNA	Ducting system
HNC	Induced-draught fan system
HNE	Smoke stack system (chimney)
HNF	Flue gas recirculation system
HNU	Flue gas pressure relief system
HNY	Control and protection equipment
HR	Chemical flue gas treatment system incl. residues removal, adsorptive process (e.g. dry additives)
HS	Chemical flue gas treatment system incl. residues removal, catalytic process (e.g. DENOX)
HSA	Flue gas ducting system within *HS.*

HSB	Flue gas-side heat exchanger, gas heater (not *HU.*)
HSC	Flue gas fan system
HSD	Reactor (reduction)
HSE	Converter (oxidation)
HSF	Flue gas-side cleaning equipment for reactor
HSG	Reduction agent dilution system
HSH	(Residues) separator
HSJ	Reduction agent supply system incl. storage
HSK	Reduction agent treatment and distribution system
HSL	Water supply and disposal system
HSM	Chemicals and additives supply system
HSN	Drainage systems
HSP	Fly ash collecting system (incl. filtering) and removal system
HSQ	Sprinkler system incl. drainage
HSR	Oxidizing agent treatment and distribution system
HSS	(Residues) forwarding, storage, loading system
HST	Flushing fluid system incl. supply
HSU	Heating fluid system
HSW	Sealing fluid supply system
HSX	Fluid supply system for control and protection equipment
HSY	Control and protection equipment
HT	Chemical flue gas treatment system incl. residues removal, absorptive process (e.g. flue gas desulfurization plants)
HTA	Flue gas ducting system within *HT.*
HTB	Flue gas-side heat exchanger, gas heater not *HU.*)
HTC	Flue gas fan system
HTD	Flue gas scrubbing system
HTE	Flue gas cleaning and filtering system
HTF	Absorption cycle
HTG	Oxidation system incl. supply system
HTJ	Absorbent supply system incl. storage system
HTK	Absorbent preparation and distribution system
HTL	Piping system for discharge of solids
HTM	Thickening and solids dewatering system
HTN	Solids drying, compacting system
HTP	(Solids/ product) forwarding, storage, loading system
HTQ	FGD plant water supply and disposal system
HTS	Chemicals and additives supply system
HTT	Drainage systems
HTW	Sealing fluid supply system
HTX	Fluid supply system for control and protection equipment
HTY	Control and protection equipment
HU	Flue gas reheating system
HY	Control and protection equipment

L Steam, water, gas cycles

LA	Feedwater system
LAA	Storage, deaeration (incl. feedwater tank)
LAB	Feedwater piping system (excl. feedwater pump and feedwater heating system)
LAC	Feedwater Pump system
LAD	HP feedwater heating system
LAE	HP desuperheating spray system
LAF	IP desuperheating spray system
LAH	Start-up and shutdown piping system
LAJ	Start-up and shutdown pump system
LAW	Feedwater sealing water system
LAX	Fluid supply system for control and protection equipment
LAY	Control and protection equipment
LB	Steam system
LBA	Main steam piping system
LBB	Hot reheat piping system
LBC	Cold reheat piping system
LBD	Extraction piping System
LBE	Back-pressure piping system
LBF	HP reducing station
LBG	Auxiliary steam piping system
LBH	Start-up steam system, shutdown steam system
LBJ	Moisture separator/reheater (MSR)
LBQ	Extraction steam piping system for HP feedwater heating
LBR	Piping system for branch or auxiliary turbine
LBS	Extraction steam piping system for LP feedwater heating (main condensate)
LBT	Emergency condensing system
LBU	Common dump line
LBW	Sealing steam system
LBX	Fluid supply for control and protection equipment
LBY	Control and protection equipment

LC	Condensate system
LCA	Main condensate piping system (excl. main condensate system, LP feedwater heating system, condensate polishing plant)
LCB	Main condensate pump system
LCC	LP feedwater heating system
LCE	Condensate desuperheating spray system
LCF	Branch turbine condensate piping system
LCG	Branch turbine condensate pump system
LCH	HP heater drains system
LCJ	LP heater drains system
LCL	Steam generator drains system
LCM	Clean drains system (collecting and return system)
LCN	Auxiliary steam condensate system (collecting and return system)
LCP	Standby condensate system, incl. storage and pump system
LCQ	Steam generator blowdown system
LCR	Standby condensate distribution system
LCS	Reheater drains system (moisture separator/reheater)
LCT	Moisture separator drains system (moisture separator/reheater)
LCW	Sealing and cooling drains system
LCX	Fluid supply system for control and protection equipment
LCY	Control and protection equipment
LD	Condensate polishing plant
LDA	Fluid treatment extraction system (if not part of another system)
LDB	Filtering, mechanical cleaning
LDC	Aeration, gas injection system
LDD	Electromagnetic polishing system
LDE	Acid proportioning system (e.g. for carbonate hardness removal)
LDF	Ion exchange, reverse osmosis system (e.g. demineralization)
LDG	Evaporation system (e.g. demineralization)
LDH	Deaeration drying system
LDJ	Preheating cooling system
LDK	Piping system, temporary storage system, pump system for main fluid
LDL	Storage system outside fluid treatment system (if not part of another system)
LDN	Chemicals supply system
LDP	Regeneration, flushing equipment
LDQ	Injection system for main fluid
LDR	Flushing water and residues removal system incl. neutralization
LDS	Sludge thickening system
LDT	Heating, cooling and flushing fluid distribution system
LDX	Fluid supply system for control and protection equipment
LDY	Control and protection equipment

LF	Common installations for steam, water, gas cycles
LFC	Common drain and vent systems
LFG	Secondary-side steam generator tubesheet lancing system
LFJ	Steam generator layup system
LFN	Proportioning system for feedwater, condensate system, incl. proportioning in boiler and turbine area
LK	Gas system (closed cycle)
LKA	Storage system
LKB	Piping system
LKC	Compressor system (if separate from gas turbine)
LKD	Preheating system
LKE	Precooling system
LKF	Intercooling system
LKG	Pressurizing system
LKW	Sealing fluid supply system
LKX	Fluid supply system for control and protection equipment
LKY	Control and protection equipment
LL	Gas cleaning system (only for closed cycle)
LW	Sealing fluid supply system for steam water, gas cycles
LY	Control and protection equipment

M Main machine sets

MA	Steam turbine plant
MAA	HP turbine
MAB	IP turbine
MAC	LP turbine
MAD	Bearings.
MAG	Condensing system
MAH	Motive water system (if separate from *MAJ*)
MAJ	Air removal system
MAK	Transmission gear between prime mover and driven machine, incl. turning gear
MAL	Drain and vent systems
MAM	Leak-off steam system
MAN	Turbine bypass station, incl. desuperheating spray system
MAP	LP turbine bypass
MAQ	Vent system (if separate from *MAL*)
MAV	Lubricant supply system
MAW	Sealing, heating and cooling steam system
MAX	Non-electric control and protection equipment, incl. fluid supply system
MAY	Electrical control and protection equipment
MB	Gas turbine plant
MBA	Turbine, compressor rotor with common casing
MBB	Turbine casing and rotor
MBC	Compressor casing and rotor
MBD	Bearings
MBH	Cooling and sealing gas system
MBJ	Start-up unit
MBK	Transmission gear between prime mover and driven machine, incl. turning gear, barring gear
MBL	Intake air, cold gas system (open cycle)
MBM	Combustion chamber (gas heating, combustion)
MBN	Fuel supply system (liquid)
MBP	Fuel supply system (gaseous)
MBQ	Ignition fuel supply system (if separate)
MBR	Exhaust gas system (open cycle)
MBS	Storage system
MBT	Motive gas generator unit, incl. combustion chamber
MBU	Additive system
MBV	Lubricant supply system
MBW	Sealing oil supply system
MBX	Non-electric control and protection equipment, incl. fluid supply system
MBY	Electrical control and protection equipment
MBZ	Lubricant and control fluid treatment system

MK	Generator plant
MKA	Generator, complete, incl. stator, rotor and all integral cooling equipment
MKB	Generator exciter set (use only if *MKC* is not sufficient for identification)
MKC	Generator exciter set, complete (10 auxiliary excitation, 20 main excitation unit)
MKD	Bearings
MKF	Stator/rotor liquid cooling system, incl. coolant supply system
MKG	Stator/rotor gas cooling system, incl. coolant supply system
MKH	Stator/rotor nitrogen cooling system, incl. coolant supply system
MKQ	Exhaust gas system (if separate from *MKG* and *MKH*)
MKU	Stator/rotor cooling oil cooling system, incl. coolant supply system
MKV	Lubricant supply system (if separate system for generator)
MKW	Sealing oil system, incl. supply and treatment
MKY	Control and protection equipment
MP	Common installations for main machine sets
MPA	Foundation
MPB	Sheating
MPG	Frame, support structure
MPR	Forced cooling system
MPS	Drying and layup system
MV	Lubricant supply system
MX	Control fluid supply system
MY	Control and protection equipment

N **Process energy supply for external users (e.g. district heating)**

NA	Process steam system (incl. condensate return)
NAA	Piping system (steam)
NAB	Piping system (condensate)
NAD	Process heat transmission system
NAE-NAJ	Piping system (steam)
NAK-NAM	Piping system (condensate)
NAX	Fluid supply system for control and protection equipment
NAY	Control and protection equipment
ND	Process hot water system
NDA	Piping system (forward)
NDB	Piping system (return)
NDC	Process hot water pump system
NDD	Process heat transfer
NDE	Hot water storage system
NDF-NDJ	Distribution systems
NDK	Pressurizing system
NDX	Fluid supply system for control and protection equipment
NDY	Control and protection equipment

P	Cooling water systems
PA	Circulating water system
PAA	Extraction, mechanical cleaning for direct cooling
PAB	Circulating water piping and culvert system
PAC	Circulating water pump system
PAD	Recirculation cooling system, outfall cooling system
PAE	Cooling tower pump system (if separate)
PAH	Condenser cleaning system, incl. all appurtenances
PAR	Make-up water piping system
PAS	Make-up water pump system
PAV	Lubricant supply system
PAX	Fluid supply system for control and protection equipment
PAY	Control and protection equipment
PB	Circulating water treatment system
PBA	Discharge from fluid treatment system (if not part of another system)
PBB	Filtering, mechanical cleaning system
PBC	Aeration, gas injection system
PBD	Precipitation system (e.g. for carbonate hardness removal)
PBE	Acid proportioning system (e.g. or carbonate hardness removal)
PBF	Ion exchange system (e.g. for demineralization)
PBG	Evaporation system (e.g. for demineralisation)
PBH	Deaeration, drying system
PBJ	Preheating, cooling system
PBK	Piping system, temporary storage system, pump system for main fluid
PBL	Storage system outside fluid treatment system (if not part of another system)
PBN	Chemicals supply system
PBP	Regeneration, flushing equipment
PBQ	Injection system for main fluid
PBR	Flushing water and residues removal system, incl. neutralization
PBS	Sludge thickening system
PBT	Heating, cooling and flushing, fluid distribution system
PBX	Fluid supply system for control and protection equipment
PBY	Control and protection equipment

PC	Service water system
PCA	Extraction, mechanical cleaning for direct cooling
PCB	Piping and culvert system
PCC	Pump system
PCD	Recirculation cooling system, outfall cooling system
PCH	Heat exchanger cleaning system
PCM	Service water system for generator, motor generator cooling
PCX	Fluid supply system for control and protection equipment
PCY	Control and protection equipment
PD	Service water treatment system
PDA	Discharge from fluid treatment system (if not part of another system)
PDB	Filtering, mechanical cleaning system
PDC	Aeration, gas injection system
PDD	Precipitation system (e.g. for carbonate hardness removal)
PDE	Acid proportioning system (e.g. for carbonate hardness removal)
PDF	Ion exchange system (e.g. for demineralization)
PDG	Evaporation system (e.g. for demineralization)
PDH	Deaeration drying system
PDJ	Preheating, cooling system
PDK	Piping system, temporary storage system, pump system for main fluid
PDL	Storage system outside fluid treatment system (if not part of another system)
PDN	Chemicals supply system
PDP	Regeneration, flushing equipment
PDQ	Injection system for main fluid
PDR	Flushing water and residues removal system, incl. neutralization
PDS	Sludge thickening system
PDT	Heating, cooling and flushing fluid distribution system
PDX	Fluid supply system for control and protection equipment
PDY	Control and protection equipment
PG	Closed cooling water system
PGB	Closed cooling water system
PU	Common equipment for cooling water systems
PUE	Air removal system
PUN	Proportioning equipment
PUP	Fish barrier
PUR	Corrosion protection for mechanical equipment
PUS	Biocide generation system

Q **Auxiliary systems**

QC	Central chemicals supply
QCA	Hydrazine supply and distribution system
QCB	Corrosion inhibitor dosing system for open component cooling systems
QCC	Phosphate supply and distribution system
QCD	Ammonia supply and distribution system
QCH	Sodium hydroxide supply and distribution system
QCL	Oxygen dosing system (incl. H ₂ O ₂ dosing)
QE	General compressed air and carrier air supply
QEA	Central compressed air and carrier air generation system
QEB	Central compressed air and carrier air distribution system
QF	General control air supply
OFA	Central control air generation system
QFB	Central control air distribution system
QH	Auxiliary steam generating system
QHA	Pressure system
QHB	Support structure, enclosure, steam generator interior
QHC	Fireside heat transfer surface cleaning equipment
QHD	Ash and slag removal
QHE	Blowdown system, flash drain system
QHF	Bunker, feeder and pulverizing system
QHG	Boiler water circulation system (also for electrode steam boiler)
QHH	Main firing system (electric powered as well)
QHJ	Ignition firing equipment (it separate)
QHL	Combustion air system (primary air secondary air)
QHM	Gas heating system (for closed cycle)
QHN	Flue gas exhaust (without flue gas treatment)
QHP	Mechanical dust handling system
QHQ	Electrostatic precipitator
QHR	Chemical flue gas treatment system, incl. residues removal, adsorptive process
QHS	Chemical flue gas treatment system, incl. residues removal, catalytic process
QHT	Chemical flue gas treatment system, incl. residues removal, absorptive process
QHU	Flue gas reheating system
QHX	Fluid supply system for control and protection
QHY	Control and protection equipment

QJ	Central gas supply, also inert gas
QJA	Gas supply and distribution
QJY	Control and protection equipment
QK	Chilled water systems
QKA	Central water chiller
QKC-QKZ	Chilled water systems assigned to structures
QL	Feedwater, steam, condensate cycle of auxiliary steam generating and distribution system
QLA	Feedwater system
QLB	Steam system
QLC	Condensate system
QLD	Condensate polishing plant
QLF	Common equipment or auxiliary steam generation and distribution systems
QLY	Control and protection equipment
QM	Air humidifying system
QU	Sampling systems
OUA	for feedwater systems (*LA*)
QUB	for steam systems (*LB*)
QUC	for condensate systems (*LC*)
QUD	for auxiliary steam generation systems (*QH*, *QL*)
QUE	for heating and cooling medium systems (*SB*, *QK*)
QUG	for demineralized water systems (*GH*)
QUN	for district heating systems (*N*)
QUP	for cooling water systems (*P*)
QUS	for HVAC systems (*SA*)
QUW	for liquid waste (*GM* and similar)

S Ancillary systems

SA	Heating, ventilation, air-conditioning (HVAC) systems
SAC-SAZ	Heating, ventilation, air-conditioning (HVAC) systems assigned to structures
SB	Space heating systems
SBA	Central heating plant
SBC-SBZ	Space heating systems assigned to structures
SC	Stationary compressed air supplies
SCA	Compressed air generation system
SCB	Compressed air distribution system
SD	Stationary cleaning systems
SE	Stationary welding gas systems
SF	Heating and fuels gas systems
SG	Stationary fire protection systems
SGA	Fire water system
SGC	Spray sludge systems
SGE	Sprinkler systems
SGF	Foam fire-fighting systems
SGG	Tank roof, tank shell cooling systems
SGJ	CO ₂ fire fighting systems
SGL	Powder fire-fighting systems
SGM	Inergen fire-fighting systems
SGX	Fluid supply system for control and protection equipment
SGY	Control and protection equipment
SM	Cranes, stationary hoists and conveying appliances
SMA	Central equipment
SMC-SMZ	Cranes etc. assigned to structures
SN	Elevators
SNC-SNZ	Elevators assigned to structures
SP	Railway installations
SQ	Road installations
ST	Workshop, stores, laboratory equipment and staff amenities
STA	Workshop equipment
STC	Maintenance areas
STE	Stores and filling station equipment
STG	Laboratory equipment
STP	Staff amenities

U	Structures
UA	Structures for grid and distribution systems
UAA	Switchyard structure
UAB	Grid systems switchgear building
UAC	Grid systems control building
UAE	Structure for pneumatic control system
UAG	Structure for transformers
UAH	Structure for supports and equipment
UAS	Shaft structure (shaft)
UAX	Special structure (plant-specific)
UAY	Bridge structure
UAZ	Ducting structure
UB	Structures for power transmission and auxiliary power supply
UBA	Foundation for Power Control Centre (switchgear building)
UBB	Foundation for Power Control Centre for boiler house
UBC	Structure for offsite system transformers
UBD	Structure for low-voltage auxiliary power transformers
UBE	Structure for medium-voltage auxiliary power transformers
UBF	Structure for generator transformers
UBG	Structure for start-up transformers
UBH	Structure for oil collecting pits
UBJ	Structure for transformer tracks
UBK	Transformer assembly building
UBL	Structure for busbars
UBM	Structure for transformer cooling systems
UBN	Structure for emergency power generating sets (without central water chiller)
UBP	Emergency power generating and central water chiller building
UBQ	Structure for emergency power generator fuel supply system
UBS	Shaft structure (shaft)
UBX	Special structure (plant-specific), e.g. Power Control Centre in desalination plant
UBY	Bridge structure
UBZ	Ducting structure
UC	Structures for instrumentation and control
UCA	Control room building
UCB	Control station building
UCL	Structure for measuring equipment
UCP	Cooling water monitoring structure
UCS	Shaft structure (shaft)
UCX	Special structure (plant-specific)
UCY	Bridge structure
UCZ	Ducting structure

UE	Structures for conventional fuel supply and residues disposal
UEA	Structure for unloading of solid fuels
UEB	Structure for storage solid fuels
UED	Structure for transport of solid fuels
UEE	Structure for treatment of solid fuels
UEF	Structure for transfer (e.g. junction tower)
UEG	Structure for conversion of solid fuels
UEH	Structure for unloading and reception of liquid fuels
UEJ	Structure for storage of liquid fuels
UEL	Structure for forwarding of liquid fuels (e.g. pump house)
UEM	Structure for treatment and handling of liquid fuels
UEN	Structure for transfer, conversion, storage of gaseous fuels
UER	Structure for forwarding of gaseous fuels
UES	Shaft structure (shaft)
UET	Structure for ash storage
UEU	Structure for ash transport
UEV	Structure for ash settling pond
UEW	Structure for combustion residues handling
UEX	Special structure (plant-specific) (e.g. manhole for gaspipe)
UEY	Bridge structure
UEZ	Ducting structure
UG	Structures for water supply and disposal
UGA	Structure for raw water supply
UGC	Structure for demineralize water supply
UGD	Structure for demineralization system
UGE	Structure for neutralization system
UGF	Structure for fire water supply
UGG	Structure for drinking water supply
UGH	Structure for rainwater
UGJ	Structure for cooling tower make-up water treatment
UGK	Flocculant mixing chamber
UGL	Flocculator structure, flocculator
UGN	Treated water basin
UGP	Sludge thickener
UGQ	Sludge dewatering building
UGR	Sludge storage structure
UGS	Shaft structure (shaft)
UGU	Structure for effluent disposal
UGV	Structure for sewerage plant
UGX	Special structure (plant-specific)
UGY	Piping and cable bridge (e.g. between *UG.* and *UM.*)
UGZ	Piping and cable duct (e.g. between *UG.* and *UM.*)

UH	Structures for conventional heat generation
UHA	Boiler house (steam generator enclosure, steam generator building)
UHB	Auxiliary boiler
UHF	Bunker bay
UHL	Structure for boiler compressed air supply
UHN	Bypass smoke stack (smoke stack incl. structure for flue gas circulation)
UHQ	Structure for flue gas filtering system
UHS	Shaft structure (shaft)
UHU	Structure for flue gas reheating system
UHV	Structure for combustion air circulation (e.g. for forced draft fan)
UHW	Boiler blowdown structure
UHX	Special structure (plant-specific)
UHY	Bridge structure
UHZ	Ducting structure
UL	Structures for steam-, water-, gas-cycles
ULA	Feedwater pump house
ULB	Emergency feed building
ULC	Structure for condensate system
ULD	Structure for condensate polishing plant
ULE	Structure for emergency supply systems
ULS	Shaft structure (shaft)
ULX	Special structure (plant-specific)
ULY	Bridge structure
ULZ	Ducting structure
UM	Structures for main machine sets
UMA	Steam turbine building
UMB	Gas turbine building
UMC	Gas and steam turbine building
UMD	Combined gas and steam turbine building with WHRB and auxiliary equipment
UMS	Shaft structure (shaft)
UMX	Special structure (plant-specific)
UMY	Piping and cable bridge (e.g. between *UMA* and *UHA*)
UMZ	Ducting structure

UN	Structures-for process energy supply
UP	Structures for circulating water systems (e.g. circulating water intake)
UPA	Circulating water intake culvert
UPB	Service water intake culvert
UPC	Circulating water intake structure
UPD	Service water intake structure
UPH	Circulating water treatment structure
UPJ	Service water treatment structure
UPN	Circulating water inlet culvert
UPP	Service water inlet culvert
UPQ	Biocide treatment building
UPR	Debris trough
UPS	Shaft structure (shaft)
UPT	Screen wash water cleaning structure
UPX	Special structure (plant-specific)
UPY	Bridge structure
UPZ	Ducting structure
UQ	Structures for circulating water systems (e.g. circulating water pumps and outfall)
UQA	Circulating water pump building
UQB	Service water pump building
UQF	Circulating water storage pit
UQG	Circulating water overflow structure, surge tank
UQH	Screen wash water discharge culvert
UQJ	Circulating water seal pit, incl. circulating water aeration structure
UQK	Circulating water venting structure
UQL	Service water surge pond
UQM	Service water collecting pond
UQN	Circulating water outfall culvert
UQP	Service water outfall culvert
UQQ	Circulating water outfall structure
UQR	Service water outfall structure
UQS	Shaft structure (shaft)
UQT	Service water discharge culvert
UQU	Circulating water spillway structure, incl. circulating water aeration structure
UQV	Structure for artificial circulating water aeration
UQW	Routing structure for circulating water discharge
UQX	Special structure (plant-specific)
UQY	Bridge structure
UQZ	Ducting structure

UR	Structures for circulating water systems (e.g. recirculation cooling)
URA	Cooling tower structure (circulating water)
URB	Cooling tower structure (service water)
URC	Structure for air cooled condenser
URD	Cooling tower pump building (circulating water)
URE	Cooling tower pump building (service water)
URG	Cooling tower connecting structure
URH	Cooling tower outlet structure
URJ	Cooling tower outfall culvert
URK	Cooling tower return structure
URL	Cooling tower return culvert
URM	Circulating water distribution building
URN	Cooling tower bypass structure
URP	Cooling tower blowdown structure
URQ	Cooling tower blowdown culvert
URS	Shaft structure (shaft)
URX	Special structure (plant-specific)
URY	Bridge structure
URZ	Ducting structure

US	Structures for ancillary systems
USA	Structure for heating, ventilation, air-conditioning (HVAC) systems
USB	Structure for space heating systems
USC	Structure for stationary compressed air supply system
USG	Fire pump house
USR	Structure for waste treatment
USS	Shaft structure (shaft)
UST	Workshop and stores building
USU	Consumables storage building
USV	Laboratory building
USX	Special structure (plant-specific)
USY	Bridge structure
USZ	Ducting structure

UT	Structures for auxiliary systems
UTA	Supply systems building
UTB	Central water chiller building
UTF	Compressed air system building
UTG	Central gas supply systems building
UTH	Auxiliary steam generator building
UTJ	Smoke stack
UTR	Chemical storage tank pit
UTS	Shaft structure (shaft)
UTX	Special structure (plant-specific)
UTY	Bridge structure
UTZ	Ducting structure
UV	Structures for chemical flue gas treatment incl. residues removal (for *HR*, *HS*, *HT*)
UVA	Structure for flue gas-side heat exchanger
UVB	Structure for flue gas fan system
UVC	Structure for flue gas scrubber, reactor
UVD	Structure for adsorbent/absorbent circuit
UVE	Structure for reagent supply, incl. preparation/treatment, storage, forwarding
UVF	Structure for thickening and solids dewatering, solids drying and compacting system
UVG	Structure for chemical flue gas treatment
UVH	Structure for (solids/product) forwarding, storage, loading
UVM	Structure for catalyst handling and storage
UVS	Shaft structure (shaft)
UVX	Special structure (plant-specific)
UVY	Bridge structure
UVZ	Ducting structure
UX	Structures for external systems (power plant-specific)
UXA	Structure for seawater desalination plant
UXS	Shaft structure (shaft)
UXX	Special structure (plant-specific)
UXY	Bridge structure
UXZ	Ducting structure

UY	General service structures
UYA	Office and staff amenities building
UYB	Staff amenities building
UYC	Administration building
UYD	Canteen
UYE	Gate house
UYF	Security gate house
UYG	Information centre
UYH	Training facilities
UYJ	Medical centre
UYN	Railway engine shed
UYP	Fire station
UYQ	Garage
UYR	Auto mobile workshop
UYS	Shaft structure (shaft)
UYT	Filling station
UYX	Special structure (plant-specific)
UYZ	Bridge structure
UYZ	Ducting structure
UZ	Structures-for transport, traffic, fencing, gardens and other purposes
UZA	Works roadways, paths, incl. associated structures
UZC	Yards
UZD	Parking areas, incl. associated structures
UZE	Railway structures
UZF	Lifting gear structures
UZJ	Fencing and gates
UZK	Gardens, incl. structures
UZL	Noise abatement structures
UZM	Protective structures against external impact
UZN	Structure for flood protection
UZP	Structure for bank/shoreline stabilization
UZQ	Structure for river regulation
UZR	Jetty, quay
UZS	Shaft Structure (shaft)
UZT	Piping and cable routes in outdoor area
UZU	Site security structure
UZW	Residential buildings, residential area
UZX	Special structure (plant-specific)
UZY	Bridge structure
UZZ	Ducting structure

X	Heavy machinery (not main machine sets)
XJ	Diesel engine plant
XJA	Engine
XJB	Turbocharger, blower
XJG	Liquid cooling system
XJH	Air intercooling system
XJK	Transmission gear between prime mover and driven machine
XJN	Fuel systems
XJP	Start-up unit, (incl. flywheel)
XJQ	Air intake system
XJR	Exhaust gas system
XJV	Lubricant supply system
XJX	Fluid supply system for control and protection equipment
XJY	Control and protection equipment
XK	Generator plant
XKA	Generator frame, incl. stator, rotor and all integral cooling equipment
XKB	Generator exciter set (use only if *MKC* is not sufficient for identification)
XKC	Generator exciter set
XKD	Bearings
XKF	Stator-rotor liquid cooling system, incl. coolant supply system
XKG	Stator/rotor gas cooling system, incl. coolant supply system
XKH	Stator/rotor nitrogen cooling system, incl. coolant supply system
XKQ	Exhaust gas system (if separate from *XKG* and *XKH*)
XKU	Stator/rotor cooling oil cooling system, incl. coolant supply system
XKV	Lubricant supply system (if separate system for generator)
XKW	Sealing oil system, incl. supply and treatment
XKY	Control and protection equipment
XP	Common installations for heavy machinery
XPA	Foundations
XPB	Sheating
XPG	Frame, support structure
XPR	Forced cooling system
XPS	Drying and layup system

A	Mechanical equipment
AA	Valves, dampers, etc., incl. actuators, also manual, rupture disk equipment
AB	Isolating elements, air locks
AC	Heat exchangers, heat transfer surfaces
AE	Turning, driving, lifting and slewing gear (also manipulators)
AF	Continuous conveyors, feeders (escalators)
AG	Generator units
AH	Heating, cooling and air conditioning units
AJ	Size reduction equipment, only as part of process
AK	Compacting and packaging equipment, only as part of process
AM	Mixers, agitators
AN	Compressor units, fans
AP	Pump units
AS	Adjusting and tensioning equipment for non-electrical variables
AT	Cleaning, drying, filtering and separating equipment, excl. *BT*
AU	Braking, gearbox, coupling equipment, non-electrical converters
AV	Combustion equipment
AW	Stationary tooling, treatment equipment
AX	Test and monitoring equipment for plant maintenance
B	Mechanical equipment
BB	Storage equipment (vessels, tanks)
BE	Shaft (for erection and maintenance only)
BF	Foundations
BN	Jet pumps, ejectors, injectors
BP	Flow restrictors, limiters, orifices (not metering orifices)
BQ	Hangers, supports, racks, piping penetrations
BR	Piping, ductwork, chutes
BS	Silencers
BT	Flue gas catalytic converter modules
BU	Insulation, sheathing

CD

C	Direct measuring circuits
CB	Radiation variables, e.g. thermal radiation, flame monitoring (other than *CR* and *CQ*)
CD	Density
CE	Electrical variables (e.g. current, voltage, power, electr. frequency)
CF	Flow, rate
CG	Distance, length, position, direction of rotation
CH	Manual input (as manually operated sensor) (e.g. fire detector)
CJ	Power (mechanical, thermal)
CK	Time
CL	Level (also for dividing line)
CM	Moisture, humidity
CP	Pressure
CQ	Quality variables (analysis material properties other than *CD*, *CM*, *CV*)
CR	Radiation variables
CS	Velocity, speed, frequency (mechanical), acceleration
CT	Temperature
CU	Combined and other variables
CV	Viscosity
CW	Weight, mass
CY	Vibration, expansion
D	Closed loop control circuits
DB	Radiation variables, e.g. thermal radiation, flame monitoring (other than *DR* and *DQ*)
DD	Density
DE	Electrical variables (e.g. current, voltage, power, electr. frequency)
DF	Flow, rate
DG	Distance, length, position, direction of rotation
DJ	Power (mechanical, thermal)
DK	Time
DL	Level (also for dividing line)
DM	Moisture, humidity
DP	Pressure
DQ	Quality variables (analysis, material properties other than *DD*, *DM*, *DV*)
DR	Radiation variables
DS	Velocity, speed, frequency (mechanical), acceleration
DT	Temperature
DU	Combined and other variables
DV	Viscosity
DW	Weight, mass
DY	Vibration, expansion

E	Analog and binary signal conditioning
EA	Unit control
EB	Group control
EC	Subgroup control
EE	Subloop control, equipment unit changeover
EG	Alarm logics
EH	Hard-wired alarm annunciation system
EJ	Visualization of operation and monitoring displays
EK	Alarm logics
EM	Access control
EN	Status-display computer, criterion display
EP	Supervisory computer
EQ	Internal automation (signal processing)
ES	Internal automation (signal conditioning)
EU	Combined analog and binary signal conditioning
EV	Signal transmission, bus counting
EY	Protective logics, priority, non-equipment-unit-related
EZ	Superordinate equipment unit protection
F	Indirect measuring circuits
FB	Radiation variables, e.g. thermal radiation, flame monitoring (other than *FR* and *FQ*)
FD	Density
FE	Electrical variables (e.g. electr. efficiency, power)
FF	Flow, rate
FG	Distance, length, position, direction of rotation
FJ	Power (mechanical, thermal)
FK	Time
FL	Level (also for dividing line)
FM	Moisture, humidity
FP	Pressure
FQ	Quality variables (analysis material properties other than *FD*, *FM*, *FV*)
FR	Radiation variables
FS	Velocity speed, frequency (mechanical), acceleration
FT	Temperature
FU	Combined and other variables
FV	Viscosity
FW	Weight, mass
FY	Vibration, expansion

G	Electrical equipment
GA	Junction boxes for analog measured data
GB	Junction boxes for binary signals
GC	Junction boxes for analog safety I&C (SILT) measured data
GD	Junction boxes for power cables ≥ 1 kV
GE	Junction boxes for power cables < 1 kV
GF	Junction boxes for operational i&c (BELT) measured data
GH	Electrical and instrumentation and control installation units (e.g. cubicles, boxes)
GJ	Processing and storage equipment for process computers and automation systems (automation equipment and servers, etc.)
GK	Information display and operator control equipment for process computers and automation systems (keyboards, monitors, printers)
GM	Junction boxes for fight-current systems of national telecommunications services
GN	Networking equipment (bus couplers and optic transceivers, etc.)
GP	Subdistribution/junction boxes for lighting
GQ	Subdistribution/junction boxes for power sockets
GR	DC generating equipment, batteries
GS	Switchgear equipment if not identified under process equipment
GT	Transformer equipment
GU	Converter equipment
GV	Structure-related earthing and lightning protection equipment, surge arrestors
GW	Cabinet power supply equipment
GX	Actuating equipment for electrical variables
GY	Junction boxes for light-current system (not of national telecommunications services)
GZ	Hangers, supports and racks for electrical and instrumentation and control equipment
H	Subassemblies of main and heavy machinery
HA	Machine stationary assembly
HB	Machine rotating assembly
HD	Bearing assembly

K/M/Q

K	Mechanical components
KA	Gate valves, globe valves, dampers, cocks, rupture disks, orifices
KB	Gates, doors, dam boards
KC	Heat exchangers, coolers
KD	Vessels/tanks, pools, surge tanks, (fluid systems)
KE	Turning, driving, lifting and slewing gear
KF	Continuous conveyors, feeders
KJ	Size reduction machines
KK	Compacting, packaging machines
KM	Mixers, agitators
KN	Compressors, blowers, fans
KP	Pumps
KT	Cleaning machines, dryers, separators, filters
KV	Burners, grates
KW	Stationary tooling and treatment machines for maintenance
M	Mechanical components
MB	Brakes
MF	Foundations
MG	Gearboxes
MK	Clutches, couplings
MM	Engines, not electrical
MR	Piping components, ductwork components
MS	Positioners, not electrical
MT	Turbines
MU	Transmission gear, non electrical, converters and boosters other than couplings and gearboxes
Q	Instrumentation and control components (non-electrical)
QA	Enclosures (for I&C component protection only)
QB	Sensors if not structurally integral with *QP*, metering orifices
QH	Signalling devices
QN	Controllers, flybolt governor
QP	Measuring instruments, testing equipment
QR	Instrument piping
QS	Condensation chambers (datum reservoir) in measuring circuits
QT	Thermowells and pockets for protection of sensors

-	Electrical components	-
-A	Assemblies and subassemblies	
-B	Transducers for non-electrical to electrical variables and vice-versa	
-C	Capacitors	
-D	Binary elements, delay devices, memory devices	
-E	Special components	
-F	Protective devices	
-G	Generators, power supplies	
-H	Signalling devices	
-K	Relays, contactors	
-L	Inductors	
-M	Motors	
-N	Amplifiers, controllers	
-P	Measuring instruments, testing equipment	
-Q	Power switchgear	
-R	Resistors	
-S	Switches, selectors	
-T	Transformers	
-U	Modulators, convertors from electrical to other electrical variables	
-V	Tubes, semiconductors	
-W	Transmission paths,, waveguides, aerials	
-X	Terminals, plugs, sockets	
-Y	Electrical positioners, e.g. solenoids (not motors)	
-Z	Terminations, balancing equipment, fitters, limiters, cable terminations, equalizers, hybrid transformers	

X	Signal origins
XA	Function group control/subloop control
XB	Control interface
XC	Closed-loop control
XG	Binary process signals conditioned by binary signal conditioning modules
XH	Binary limit signals derived from analog process signals
XJ	Signals from non-standard areas (e.g. black box, dedicated I&C)
XK	Equipment unit/component protection
XL	Control room and control stations, signals not assigned to specific control systems (e.g. control interface tiles)
XM	Higher-level static individual and group alarm signals
XN	Status-display computer/criterion display
XP	Supervisory computer (process computer)
XQ	Analog signal
XS	Functional group control step signals
XT	Turbine generator I&C, binary signals
XU	Higher-level dynamic individual and group alarm signals
XV	Signal gating (protective logic, alarm logic etc.)
XW	Hardwired alarm annunciation system
Y	Signal applications
YA	Functional group control/subloop control
YB	Control interface
YC	Closed loop control
YJ	Signals from non-standard areas (e.g. black box, decided I&C)
YL	Control room and control stations, signals not assigned to specific control systems (e.g. control interface tiles)
YN	Status-display computer/criterion display
YP	Supervisory computer (process computer)
YQ	Analog signals
YT	Turbine generator I&C, binary signals
YV	Signal gating (protective logic, alarm logic etc.)
YW	Hardware alarm annunciation system