ELECTRICITY GENERATING AUTHORITY OF THAILAND

SUPPLEMENTAL NOTICE NO. 1

INVITATION TO BID NO. RTS2-S-10

SUPPLY AND CONSTRUCTION OF 115 kV KHON KAEN 1 SUBSTATION (GIS) AND IMPROVEMENT OF 115 kV KHON KAEN 2 SUBSTATION

TRANSMISSION SYSTEM EXPANSION AND RENOVATION PROJECT PHASE 2 FIRE PROTECTION SYSTEM PHASE 3

The attached Supplemental Notice shall be considered as part of the bidding documents No. RTS2-S-10.

As acknowledgement of receipt that all additions, deletions and revisions contained in this Supplemental Notice are incorporated into the above bidding documents, Bidder is requested to sign and return this acknowledgement via email address : pirada.s@egat.co.th within three (3) days from the date of the announcement of this Supplemental Notice on http://www4.egat.co.th/fprocurement/biddingeng/.

The original acknowledgement which is manually signed in ink by a person or persons duly authorized shall be included in the proposal to be submitted on the bid opening date.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

September 23, 2019

ACKNOWLEDGEMENT

This undersigned Bidder hereby certifies that the additions, deletions and revisions set forth in this Supplemental Notice to Invitation to Bid No. RTS2-S-10 are incorporated as part of the above bidding documents and will be fully included in any bid which he may submit.

Signed	
Title	
Company	
Date	

ELECTRICITY GENERATING AUTHORITY OF THAILAND

SUPPLEMENTAL NOTICE NO. 1

INVITATION TO BID NO. RTS2-S-10

SUPPLY AND CONSTRUCTION OF 115 kV KHON KAEN 1 SUBSTATION (GIS) AND IMPROVEMENT OF 115 kV KHON KAEN 2 SUBSTATION

TRANSMISSION SYSTEM EXPANSION AND RENOVATION PROJECT PHASE 2

FIRE PROTECTION SYSTEM PHASE 3

The following supplemental information is hereby given for the above described Invitation:

Volume II of IV

Section I : Ratings and Features

Replace Ratings and Features No. MS2782(IEC) pages I26-I29 with the revised pages with (Rev.1) attached.

Bid submitted must be in accordance with this Notice. Receipt of this Notice shall be acknowledged by the Bidder on the proposal included in the Bidding Documents in the space provided on page Part 3-C21, Article C-5 Supplemental Notices.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

September 23, 2019

Metal-Clad SF₆ Gas Insulated Switchgear Specification No. 181



Substation Electrical Equipment Engineering Department

R	atings and Features	Designed : Bowwa	Validated : 3A7~~	Revision 1	Page 1/4	
R	F No. MS2782(IEC)	Verified: \$2500	Approved : "ມິຍຸກ	/ Dated :	28 5062	
а.	Туре		Metal-Clad, SF6- insulat	Indoor installe	ition,	
b.	Enclosure		Single phase	e or three phase	es enclosure	
C.	Rated voltage		24	kV		
d.	Number of phase		3			
e.	Rated frequency		50	Hz		
f.	The maximum permissi at 110 % rated voltage	ble partial discharge leve	el < 20	pC		
g.	 Rated insulation level Rated short-duration withstand voltage, r. Rated lightning impution 	power-frequency m.s lse withstand voltage, pe	50 ak 125	kV kV		
h.	Current rating - Rated normal current - Busbar - Feeders - Incoming Feed - Outgoing Feed - Outgoing Feed - Outgoing Feed - Rated short time (1 s) for main and earthing - Rated peak withstand and earthing circuit	er er 1 (to PEA) er 2 (to C-Bank)) withstand current g circuit	2,000 2,000 2,000 630 25 63	A A A kA kA		
i.	Busbar material		Copper or be	etter		
j.	Circuit BreakerType of mechanismRated insulation level			Vacuum circuit breaker, 3 pole, Spring operated		
	- Rated short-duration	on power-frequency	50	kV		
	 Withstand voltage Rated lightning im 		125	kV		
	at 110 % rated voltag - Rated normal current	ssible partial discharge le e	evel < 20	pC		
	 Feeder Circuits Outgoing Feede Outgoing Feede Outgoing Feede Rated short time (1 s) Rated short circuit browners Rated interrupting tim Rated short circuit material Type of tripping Rated operating seque Rated control circuit to the seque 	r 2(to C-Bank) withstand current eaking current ne aking current ence	2,000 630 25 25 5 63 Three poles CO - 15s - C 125	A A kA kA Cycles kA		



Metal-Clad SF₆ Gas Insulated Switchgear

Specification No. 181

Substation Electrical Equipment Engineering Department

pecification No. 181		The second se	rdah	nent Engine	ung	Departmen
Ratings and Features	Designed :	ষ্টিশমন্ন	Validated : 3,89	م√ ∫ Revis i	on 1	Page 2/4
RF No. MS2782(IEC)	Verified :	772748	Approved : (in	Lo of Dated	: 3	222005
- Max/Min control circ	cuit voltag	x				
- Trip coil	wit vondg	•	137.5/87.5	5 Vde	c/Vd	e.
- Closing coil			137.5/106		:/Vd	
- External AC power s	source		400/230 V		~ ~ ~ ~	0
			100,200			
Disconnecting Switch C	Combined v	with Standard				10' 1 1
 Type Rated insulation level 	1		I riple pol	e, Triple thro	ow ar	id Single bi
		C				
- Rated short-durati	ion power-	requency	•			
withstand voltage	, r.m.s.		E 0	1-77		
- Phase-to-earth			50	kV		
- Across the isola	ating distan		60	kV		
- Lightning impulse	= withstand	voltage, pea		1. E F		
- Phase-to-earth			125	kV		
- Across the isola		ice	145	kV		
- Rated normal current	[
- Feeder Circuits	1		0.000			
- Incoming Feed			2,000	A		
- Outgoing Feed			2,000	A		
- Outgoing Feed			630	A		
- Rated short time (1 s		current	25	kA		
- Rated peak withstand			63	kA		
- Operating mechanism				emergency	mam	ual operatio
- Mechanical interlock			to be provi			
 Operating and control 	ol voltage		125 V	dc		
Standard Earthing Swite	h at Main	Bus (Class A	0			
- Type				e, Single thro	w ar	d Single h
- Rated short time (1 s) withstand	current	25	kA		
- Rated peak withstand			63	kA		
- Operating mechanism				emergency	mami	al operatio
- Operating and contro	l voltage		125	Vdc		
 Voltage Transformer for all VTs As specif 	ind in DWA	2 No VV1	S 1 about 04/04			
- Quantity per bus		J. 170. NAI-				
TT'-1 14 C	minment ([]m)	3 24	kV		
 Hignest voltage for e Rated primary voltage 		City	24 22/ √3	kV kV		
 Voltage ratio 	(UPr)		22/ V3 200 & 200			
 Secondary voltage ratio 	tina		200 ac 200			
 No 1 secondary w 			110/ 13	v		
 No 1 secondary w No 2 secondary w 			$110 / \sqrt{3}$ 110 / $\sqrt{3}$	v		
- Burden	monng		LIU/ VJ	v		
- No 1 secondary w	indina		25	VA		
 No 2 secondary w 			25 25	VA VA		
- Simultaneous	monig		25 25	VA VA		
- Accuracy class			23	٧A		
 Accuracy class No 1 secondary w 	indino		0.2			
 No 1 secondary w No 2 secondary w 			0.2			
	mang		Subtractive	a		
- Polarity			SUDURACEIV	\$		

Metal-Clad SF, Gas Insulated Switchgear Specification No. 181



Substation Electrical Equipment Engineering Department

Ratings and Features	Designed :	8mma	Validated : 5 Kow	Revision 1	Page 3/4
RF No. MS2782(IEC)	Verified :	LIOFAS	Approved : (11/13) ang sor	Dated : 2	8 5002

n. Current Transformer

0.

p.

. Current fransformed		
 for QW11A, QW12A and QW13A As specified in Quantity per phase No of core Current ratio Core No 1 Core No 2 Continuous thermal current rating factor Accuracy class Polarity Thermal short time current rating for 1 s Mechanical short time current rating, peak for QW11B, QW12B and QW13B As specified in H Quantity per phase No of core Current ratio 	1 2 1800 : 1 1800 : 1 1.0 5P20, 30 VA Subtractive 25 63 DWG. No. KK1-S- 1 2	kArms kApeak
 Core No 1 Core No 2 Continuous thermal current rating factor Accuracy class Polarity Thermal short time current rating for 1 s Mechanical short time current rating, peak 	800/1600 : 1 800/1600 : 1 1.0 0.2S, 30 VA Subtractive 25 63	kArms kApeak
 for QW31A, QW32A and QW33A As specified if Quantity per phase No of core Current ratio Core No 1 Core No 2 Continuous thermal current rating factor Accuracy class Polarity Thermal short time current rating for 1 s Mechanical short time current rating, peak 		-
 Surge Arrester Voltage rating Duty cycle test current 	24 10	kVrms kA
Terminations - Type - Number per feeder - Rated insulation level		ns, Dry type plug in ngle Line Diagram
 Rated short-duration power-frequency Withstand voltage, r.m.s. Rated lightning impulse withstand voltage, peak Rated normal current 	50 125	kV kV
 Feeder Circuits Incoming Feeder Outgoing Feeder 1(to PEA) Outgoing Feeder 2 (to C-Bank) 	2,000 2,000 630	A A A

Metal-Clad SF₆ Gas Insulated Switchgear Specification No. 181



Substation Electrical Equipment Engineering Department

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Ratings and Features	Designed : Borwa	Validated : 345 ~ J	Revision 1	Page 4/4
RF No. MS2782(IEC)	Verified: 3 Mar	Approved : (IINL)	Dated : 2	FRALL
 Cable size Feeder Circuits Incoming Feed Outgoing Feed Outgoing Feed Rated short time (1 states) Rated peak withstan Rated control circuit vol 	ler 1 (to PEA) er 2 (to C-Bank) s) withstanding curre d current	2x1/C-500 2x1/C-500 1x1/C-500 ent 25 63 125	mm ² /pha mm ² /pha mm ² /pha kA kA kA	se
			Vdc	
. Application Standard		IEC 62271-200		