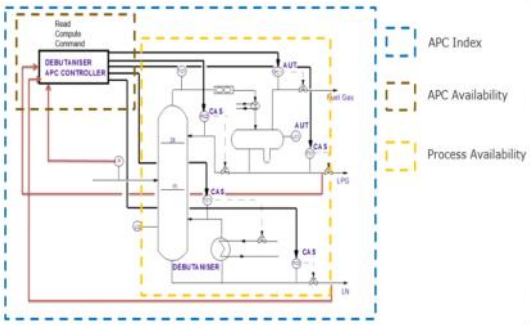
Nota

Friday, November 12, 2021 8:33 AM

APC Index is an indicator to measure Plant APC performance

APC Index = (APC Availability/Process Availability)

Description	APC Index	APC Availability	Process Availability
Methodology	= APC Avail / Process Avail	= Total APC avail hours / Defined time i.e. 24hrs	= Total Process avail hours / Defined time i.e. 24hrs
Example			

Carbon Number issue

When CN increase,reaction more endhothermic,require more heat.COT akan drop. May require higher firing

When CN decrease, Pload by CN reduce..there is opportunity to maximise feed by CN to 100. can increase NG and ATR..COT akan naik since less C to absorb heat.

A decrease in Carbon Number reduces reaction heat demand, causing COT to increase, while also reducing plant load on a carbon basis unless feed flow is increased; conversely, higher Carbon Number increases plant load but requires more firing and tends to lower COT.

TO DO

Thursday, October 10, 2024 4:28 PM

10/10/24

PML PEMS check worksheet
PCLDPE Report
PML Tuning

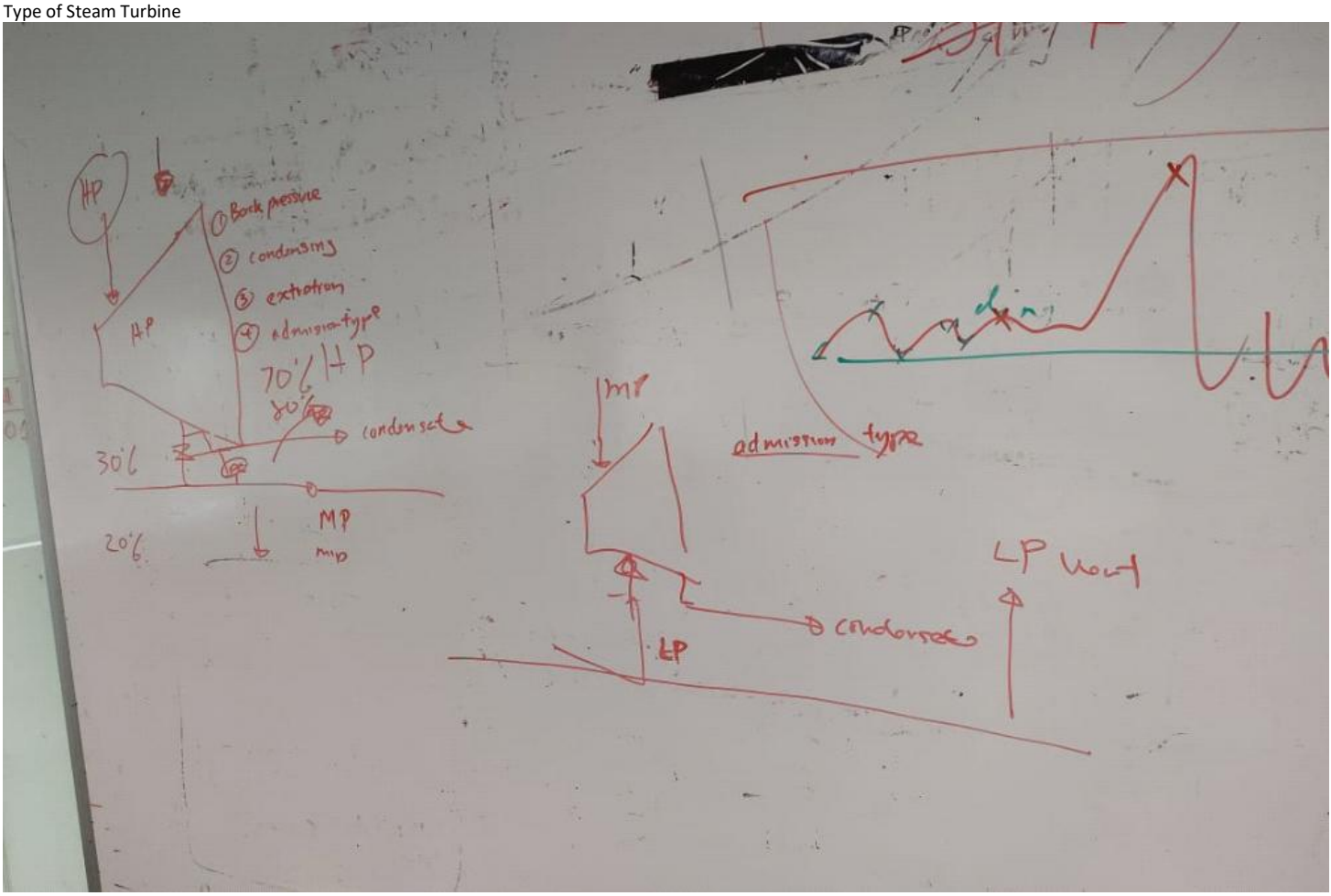
Friday, March 19, 2021 3:41 PM

Inferential class 19/3/21 by Maya

If from lab data, typically kita guna steady state. Paling bagus kita collect data masa process tengah stable. Tapi weakness nya, maybe not so accurate masa plant tak stable

If analyzer, boleh model guna dynamic modelling

Type of Steam Turbine



Meeting for TRC Pack review

Tuesday, April 6, 2021 5:26 PM

1)include cost dengan exec summary
2)value propositon
    Enabling value creation(group kan balik)
3)Exec summary - value /cost susun ikut value proposition

RTOT

Thursday, April 8, 2021 9:40 AM

Niche of RTOT

1) OTAM - to detect instrusion if ada orang nak hack
2) PETRONAS domain - kita access guna own petronas ID.takde common ID. If keluar petronas,takleh access
3) Download Antivirus - Boleh donwload automatically. Dan pergi ke semua server.
4) FTP server - to transfer the file. No more USB. Tapi upstream, ada pakai macam kiosk,cucuk USB di situ.Ada anti virus.

Tanya plant:
1)inventory servers
2)RTOT progress
3)Inform pasal recent issue,push utk RA
4)Tanya pasal planning

IT AV Windows update for 4 and lEevel 3.5..Ada vendor server at 3.5 will cater for level 3 and below.

Aspen DMCplus migrate to DMC3

Thursday, April 15, 2021 11:10 AM

1) Need to have .dpp file
2) Kena export all vector list for DMCplus Model. Export as .dpa (preferred)
3) Export vector list juga .vds
4) Export all cases
5) Export final model .mdl/.dpa(contain info like curve operation)

Create new DMC3 file

1) Import file, "import model" -just model je
2) Import application -- import .ccf
3) Import dataset -- import vector,create new dataset
4) Import cases pulak

Camne kalau takde .dpp?
Calculation?
If nak tambah on CV from classic platform. - boleh add case/add model,copy to master only.

Mdl3. -- 1 token for 1MV - can use more features
.mdl -- 1 token for 3MVs

ALTUM

Friday, April 16, 2021 3:37 PM

Note:

Exec Summary put Yokogawa
Letak Cybersecurity main point

Mode of working
1)office
2)office
3)100 in home
4)

Good feedback from Hj Toslan
Should raise this to Special TRC.

1)Address Change Management requirement
2)Capability improvement
3)Value to bussiness
4)En Hafiz Halim for value creation in Upstream

Remote Engineering and Remote Operation

Progress Update PCLDPE

Tuesday, April 20, 2021 3:39 PM

1. Initialize portion = initialize prediction dan initialize analyzer bias
2. CIMIO configuration change,install dalam APC server itself..
3. Temperature ramping is observed okay after moving cimio in OPC server

BLCA report

1) Pali akan share schedule , utk rebaseline dan PTR
2) Extractkan Tuning
3) Amin to request list of snapshot
4) Engineering training (to think and consider)

Meeting with Yokogawa

Friday, April 23, 2021 4:01 PM

2018, Yokogawa and Chai come to visit GTS,announce SMOC will be obselete.
We were not ready. PACE is new. A lot of things to do before upgrading.
Many APC servers are obselete, Chai mention the resolution is ESU.
Contact IT, IT kata ada enteprise agreement.
2019 PET ICT become GD.

Then ,2020 under Dr Thana, dia sort out the agreement etc. give the cost etc.
IT team don't know how to deploy, in IT environment.They are concern about compatibility.
Dr Wang mentioned this has been implemented in other OPU.

1)Plan to upgrade - not in short time
2)Subscribe to ESU to buy time (Hardening of servers, throught FTP ,cannot use legacy mode(
3)To see whether it is worth to subscribe(Risk Assessment)

Interest: Is the ESU is compatible to OT parts.

Cybersecurity
+consolidate APC,DCS etc..

APC Asset Management System - the inventory

PCLDPE:
Id login use as OPC server

PCASB:
Join domain, APC server died.

PDH:

SMOC is not installed corently

<u>Gaps to be assessed: by RA</u>

HTTP opposed to HTTPS
Thin client instead of thick client
HyperV instead of VMWare

Yokogawa:
ESU - obselte window OS
Https not support
Thin client
Tak boleh support vmware
Microsoft defender tak boleh receive(APC server)

Monday, June 28, 2021 12:31 PM

Project ALTUM Note

MOM for Amin

1)Arrange allignment meeting with Aspen, GD (KNJ,Zarul IT,Wintell,Hisnuridi
2) Arrange a short meeting,one by one to brief/discuss -30min (Yokogawa CS allignment preparation and discussion) - Awareneess, surface out issue
3)Arrange for Honeywell,-to discuss on issue etc (Nyonya and Johari). Review gaps for Honeywell.
4) Training reply and software purchase

1)List down the participants
PCESB
PCOGD
PCLDPE
Michael
Azmi
KNJ
Zarul
Fauziah Ali
Sharul Rashid

M Zainal B Jemaludin (DE-IS/DIGITAL)
Mohamad Hisnurisdi Bakri (DE-IS/DIGITAL)
M Zul Hilmi Asmad (DE-PS/DIGITAL)
Lim Hui Keat

2)To sed invitation to all OPUs rep (PPT, MTBE,PCASB,MLNG, PGB. Kejar Pele juga
3)Find MOM for Honeywell dulu
4)Update pack,reply to suraya

8/7 Thursday 9-10
13/7 Tuesday 10-11
15/7 Thursday 10-11

Tupperware Director Meeting

Friday, July 2, 2021 8:33 PM

2 July 2021

Hafiy
1)beli domain - tupperwarehafiy - redirect ke etup store.
2)gunakan tuppsocial. Donload content,upload sebagai story..story lagi ramai tengok.
3)buat fb page,buat IG,buat tiktok juga.
4)da advanced ,baru buat ads..tapi kena belajar sikit,takut rugi je la.kena belajar dulu.

Kena aktif - tupp social mintak 5 kali per post.
Try main story - capaian lagi tinggi
FB cabutan bertuah - teka berat,kasi hadiah,naikkan engagement.

Kalau jadi member,ada no telefon,kontek,masukkan dalam group..ajar cara online

Yulia Mairiza

1)buat FB page
2)Tupp social - sangat mudah,ada gambar, ada bantuan ayat..boleh buat posting untuk seminggu.
3)Etup store - fokus etupstore.

Kena plan posting IG. Posting la banyak banyak.

Faceebook Ads
-Kena main dulu..
-mudah dan murah
-orang Malaysia ramai main FB
-kak ayu kata suka get more messages
-kena ada whatsapp bussines
-focus utk apa,cari member ke etc…kak ayu dapat juga 4 member dari FB ads

(
saya buat fb page khas untuk botol air tupperware..setiap bulan ada sales yg datang dr fb page tu..) -- menarik ni

Umum

Thursday, July 8, 2021 5:26 PM

Ikhlaskan niat :
Mendekatkan diri pada Allah
Peroleh redha Allah

Penting niat ni, sebab dia akan menentukan apa yg kita akan capai.
'Inna a'malu bin niat" Riyadhus solihin, Hadis arbain,semua disusun dengan hadis berkenaan niat dipaling hadapan.
Hadis masyhur pasal orang yang dermawan,ilmuwan dan mati syahid. Tetapi akhirnya dicampakkan ke neraka kerana niat yang tidak betul.

Alhamdulillah, Allah kurniakan kita nyawa,kurniakan nikmat utk kita terus bernafas,melayari kehidupan ini. Wpun kini kita berdepan dengan cabaran besar ya,tak pernah terjangka,tak pernah terfikir kita akan melalui zaman seperti ini.

Pandemik Covid,melata ke seluruh pelusuk dunia,tak nampak tanda tanda akan berkurangan,dah hampir mencecah 2 tahun da.

Kita semua sama2 berhadapan ujian ni. Kadang rasa marah,rasa frust,sekarang dah banyak diceritakan perihal mental health..ini benar2 menguji kita..

Kalau tengok 2:155, allah memang beri ujian,jadi bersabar lah..dalam surah al mulk,allah berikan ujian,utk uji kita,siapakah yg paling baik antara kamu..inlah yg kita boleh buat utk bantu perkukuhkan rohani kita.jasmaninya,daftarlah utk vaksin,jaga SOP, perhatikan jika ada tanda2 mental health.cari bantuan jika perlu.

Sama2 kita berjuang,sama2 kita saling bantu membantu…mdahan Allah permudahkan segala urusan kita semua.

Dari semua ujian ni,kita doa banyak2 mudahan Allah mengangkat darjat kita,dah masukkan kita semua ke dalam syurga aminn..

Engagement with OPU

Tuesday, July 13, 2021 10:31 AM

PGB (13 July 2021)

1) Dah email PTG to all by Pn Fauziah. Plan to send to I&C juga.PTG will be upgraded to PTS later.
2) Ada alignment dengan Yokogawa soon.
3) OTAM to detect instrusion.If ada deviation, we need to do RA. Old server, cepat2 buat RA .invite I&C . Know our gap, and buat planning. Wpon ada plan,tapi kena furnish dengan RA. - obselete tak boleh join domain,sebab obselete.
4) Jo - 2023, to complete all migration work. Plan to maintain at level3.0 dulu. Nak follow MLNG.tapi MLNG dah setel da pun.
5) Boleh request from MLNG. MLNG pernah buat RA.
6) RTOT focus on DCS sahaja sekarang. Next stage, akan masuk ke subsystem, naik ke level atas. Plan akan buat for GNE dahulu.
7) MLNG new pace server, dekat level 3.5.(info), OPC dekat Level 3 , guna matrikon tunneler
8) PGB need to do RA - I&C TP to lead, bagi pada Michael to review.
9)

MRCSB (14th July 2021)

1) PTG highlight GD requirement, list down all Cybersecurity requirement.
2) GD is not IT only, there are IT and OT team. OT lebih pada orang Plant. APC categorized under OT.
3) MRCB level 2. Kalau bawah level 3, should be no problem. Dah receive window and IT update.
4) OPC and APC separated. If to upgrade OPC,no need to upgrade both.OPC macam dah include sekali.Raihan di GD yang propose. Kena check ni balik how OPC work with APC
5) Hardware - perlu check ,beli dari sapa. Etc

MTBE (15th July 2021)

1) MTBE with different APC setup.
2) PTG is for long term, to operate APC from your laptop. And the vendor
3) Sekarang banyak at level 3. Not in one year,
4) GNE banyak TP gerak ke PD&T. the TP to be shared across PETRONAS.
5) Cybersecurity PTS dah take over. PTS 14 by I&C.
6) Issue with PHD, PI . RTOT already done.
7) SMOC server is going to be upgraded next year.Sekarang obselete
8) SMOC APC on DCS network - layer 3 . On OT domain
9) Better to conduct RA.
10) Manual reboot at MTBE for APC server

PREFCHEM (21th July 2021)

1) APC server groupwide dah flagged not complying to CS (not updated OS yet.)
2) We arranging alignment meeting with Yokogawa. PRefChem is using PACE.
3) PTG is the guideline, 80%..another 20% is still yet not decided how to implement.
4) If ada deviation, kena quickly raise RA. Kena ada mitigation plan
5) PTG is formulated for the future. Where to locate our APC server etc.

6) Problem biasa dengan server 1) Obselete 2) tak join the domain.
7) PRefChem APC servers are at 3.5
8) OS kena N-1. Current 2019..N-1 is 2016.
9) Dalam RTOT ada banyak component,
10) RTOT cover remote access..Not remote operation.
11) Remote operation for engineer guna web server.Change tuning ,limit,but cannot change model.for routine work
12) RTOT connected via jump server, Remote Access.

MLNG 23 July
1)RTOT by phases. Phase 1 - Layer 3 and below. Phase 2 - for subsystem

PCASB 27/7
1)GD tengah roll out RTOT utk kuatkan Cybersecurity. Lepas roll out,dia akan install OTAM.boleh detect intrusion, boleh nampak semua server. Ada update antivirus ke,siapa masuk,dah update windows ke belum.

2) GD di KL boleh detect APC yang masih on obselete window OS.
3) PCASB still on SMOC and planning to upgrade to PACE.
4) GD advise to raise RA. GD has no template ,and they request OPU to conduct dlu. Kemudian hantar ke GD to review.
5) Join IT domain utk identity sahaja. Windows and AV update tak semestinya lalu IT domain.
6) Initial plan to put level 3.5.
7) GD kata CITRIX access utk tak boleh utk permanent. PCASB sekarang tengah guna CITRIX utk remote work.
8) PCASB plan to maintain APC at L3, if for remote, PCASB prefer to get relay server,level3.5, and web server 4.0
9) PCASB to do RA. But PCASB plan to update to Pace RT in august.
10) Kena raise OPSR utk configure ,hookup semua. Kalau dulu direct vendor. Sekarang kena lalu GD,GD yang kena buat.
11) Dapat notification pasal PI, 2 bulan to solve.Late notification .
12) Boleh check balik start 30min

PPTSB 12/8/21

1) Many APC servers not complying to CS requirement. Detected OT devices.
2) If detect intrusion,or cannot be seen from KLCC, akan cut APC terus.
3) SMOC,servers are obsolete. CS asked us to initiate RA first. If anything yang tak comply
4) Virus attack to DCS HMI, APC PI semua affected.
5) PPT plan to comply by next year,dah request budget.
6) RTOT dan OTAM - phase 2, tapi first phase just AV and Windows update. Dia tak proper phasing .Jumpa APC,terus suruh join
7) PPT vision - lebih kurang MRCSB. PIVOT etc. ada target directly to write to APC system. So, PPT plan to bring up to level 3.5 and separate OPC at different layer.
8) GD tak support previous version kalau beli dulu. Dia tak patut jadi macam tu..lagi susah berbanding beli direct dari vendor.Vendor akan support semua version. -- to check
9) To invite team GD dan yang support OPU juga. Amin to do.

Mandarin Kelas

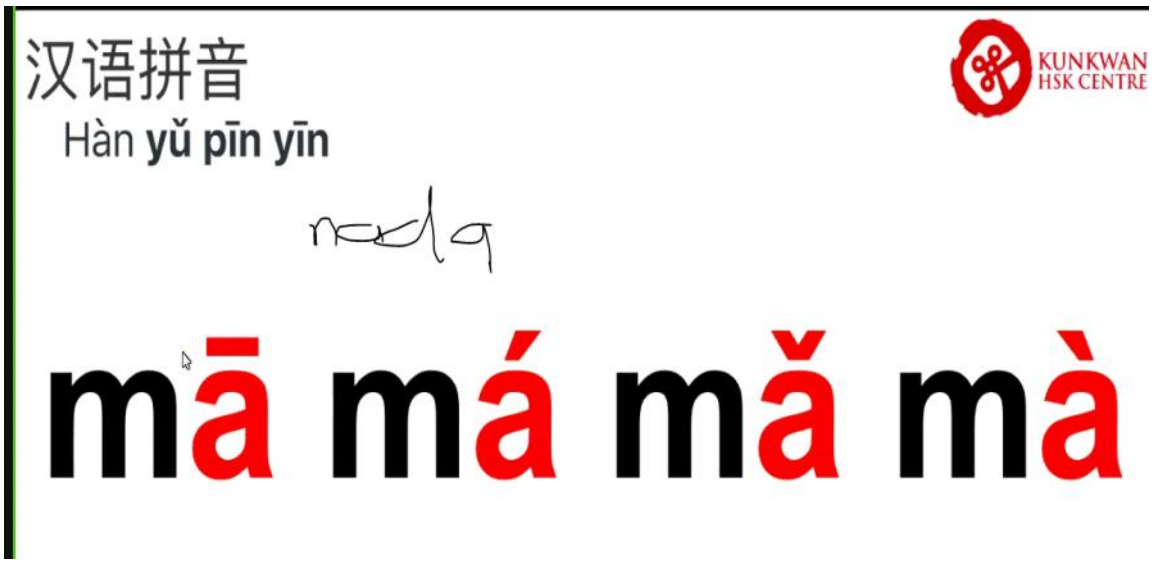
Tuesday, July 13, 2021 8:09 PM

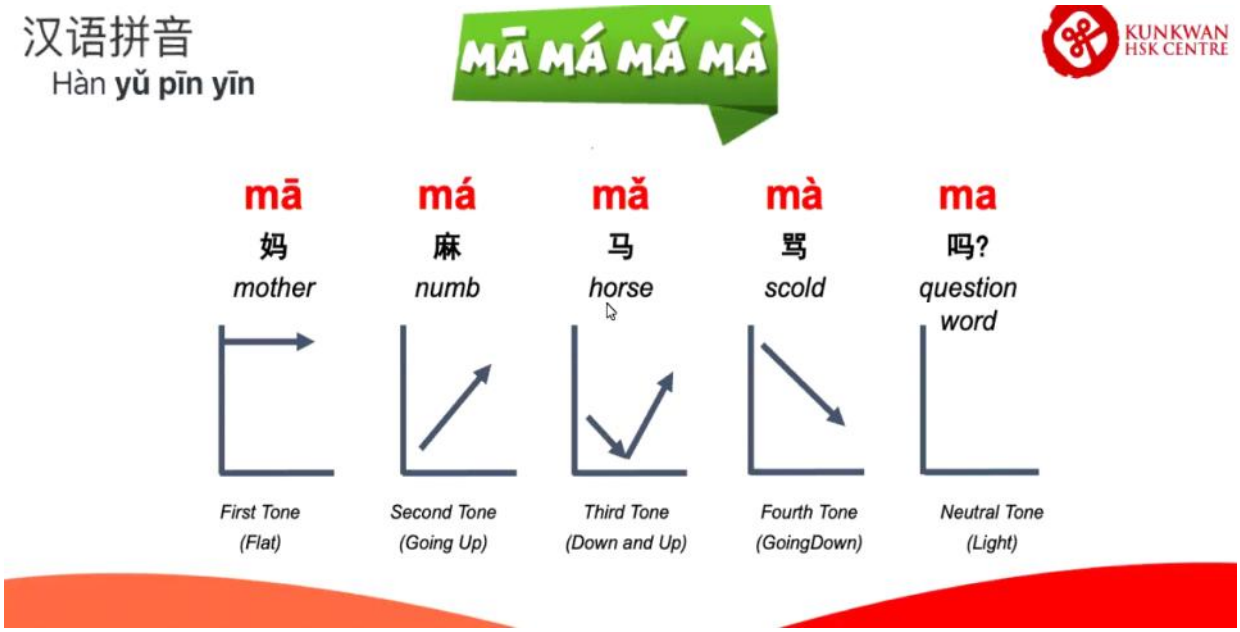
Nihao - Hello.. Jawab Nihao

Ni hao ma - how are you? -- "ma" maksudnya ke,or not
Reply = wo hen hao (saya sangat(very)

Ni - awak
Hen - sangatt

Hanyu = mandarin
Pinyin - spell sound





Ma tengah tu ,paling rendah..maaa

Recap

KUNKWAN HSK CENTRE

• *Hello*	Nǐ hǎo
• *How are you?*	Nǐ hǎo ma?
• *What is your name?*	Nǐ jiào shénme míngzi?
• *Nice to meet you*	Hěn gāoxìng rènshi nǐ
• *Goodbye*	zàijiàn

You are viewing Muhammad Hafizuddin's screen
View Options

KUNKWAN HSK CENTRE

Saya Punya Kawan Di Mana ?

wǒ de péngyǒu zài nǎlǐ ?

1. yī èr sān sì wǔ liù qī
   1 2 3 4 5 6 7
2. wǒ de péngyǒu zài nǎlǐ ?
   Saya Punya Kawan Di Mana ?
3. zài zhèlǐ zài zhèlǐ
   Di Sini Di Sini
4. wǒ de péngyǒu zài zhèlǐ
   Saya Punya Kawan Di Sini

Xièxie
谢谢 Thanks!
Ālǐ : Xièxie
阿里 : 谢谢。
Ābù : bú kèqì
阿布 : 不 客气。
thank you!!!
KUNKWAN
HSK CENTRE

GNE RTOT Program

Thursday, July 15, 2021 11:26 AM

1) Tengok recording 25-35min
2) We should put servers in domain,under domain controller, we should control who has access to the servers.
3) Domain, window/AV update,
4) Petronas domain (Level 4) -IT stuff.
5) APC will join domain
6) 45-51min (pasal domain controller)
7) 55-1.02 (citrix)

RTOT complete only after
1)join domain
2)Kena ada OTAM
3)Kena window and AV update.

Proposed Strategy for RTOT & OTAM for APC

RTOT / OTAM Component	Work Scope – Planning/Overall	Work Scope – Site Level Execution
Antivirus	1. Creation of OPU APC groups per Site and OS type. 2. Creation of Policies and Schedules.	1. Installation of McAfee Agent 2. Installation of Endpoint Security, Threat Prevention and Web Control package. 3. Installation of Latest Anti Virus Definition
Domain Controller	Joining DCS Domain Controller: 1. Creation of OPU APC domain group 2. Creation of Log Collection & Windows Update Policy Independent 1. Review Access Policy	Joining DCS Domain Controller: 1. Join Domain (if applicable) Independent: 1. None
Patch Management	1. Creation of OPU APC groups per Site and OS type.	Part of Domain: 1. Auto-inherit Log Collection Rules Independent: 1. Manual configuration of Windows Event Forwarding
Logs Collection	-	Part of Domain: 1. Auto-inherit Log Collection Rules Independent: 1. Manual configuration of Windows Event Forwarding
Backup & Recovery	1. Define Backup Schedule	1. Install Backup Agent 2. Perform first full backup

Sand Box

Friday, August 20, 2021 12:20 PM

VM minimum 4

DCS 2 VM
OPC 1 VM
PACE 1 VM

If you use 2019, can have unlimited VM,Can create another for Aspen

Internal Decab Meeting

Tuesday, January 3, 2023 2:16 PM

To achieve 49million tonne by 2024. Currently at 53millionCO2equivalent

TPCP

Friday, November 24, 2023 2:30 PM

Go through modelling - Auto correlation, assessment of model in PACE
Snapshot of PML Monitoring template - done
Why kita letak AVG COT - cheryl - done
CARI SNAPSHOT RUNTIME UTK K5 - ALTUM done
Study PTG 164305 Zone and Conduit
Zone:
A grouping of logical or physical assets that share common security requirements

Conduit:
The flow of data between 2 zones

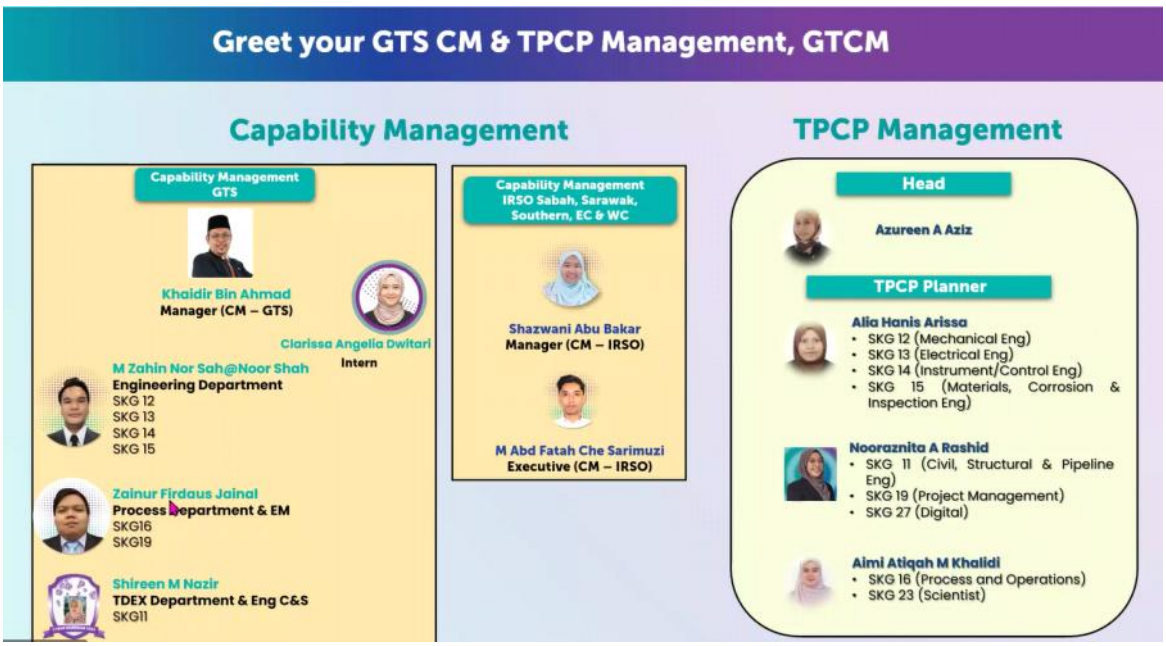
Belajar dgn maya pasal modelling technic
Atu cross correlation - done

Esok cuba buat IQ masukkan lab data

2 JAN
Go through B1 semula -EQ DUTY CALCU
K2 Modelling
Go through semua Base semula
Level tuning formula

1)Masa- adakah assesee can request to be assessed semua..or assessor to dictate
2)Jika 19MV ni,consider kecik ke?
3)Process unit ni consider bagaimana?
4)Complain hanya tahu satu area. Tapi betul ke B1 ada zoom in ke satu unit,dan discuss properly
5)Jika assessee cakap, smooth commissioning, tak banyak tuning2 ,assessor memang takkan percaya ke?
6)complexity?what is complexity dari segi pandangan assessor

TPCP 2025



TPCP Assessment is a stage gate before becoming a TP/TMTP

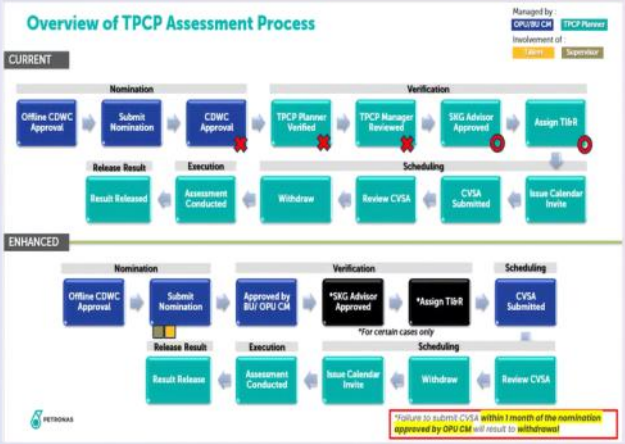
WHAT IS TPCP ASSESSMENT?

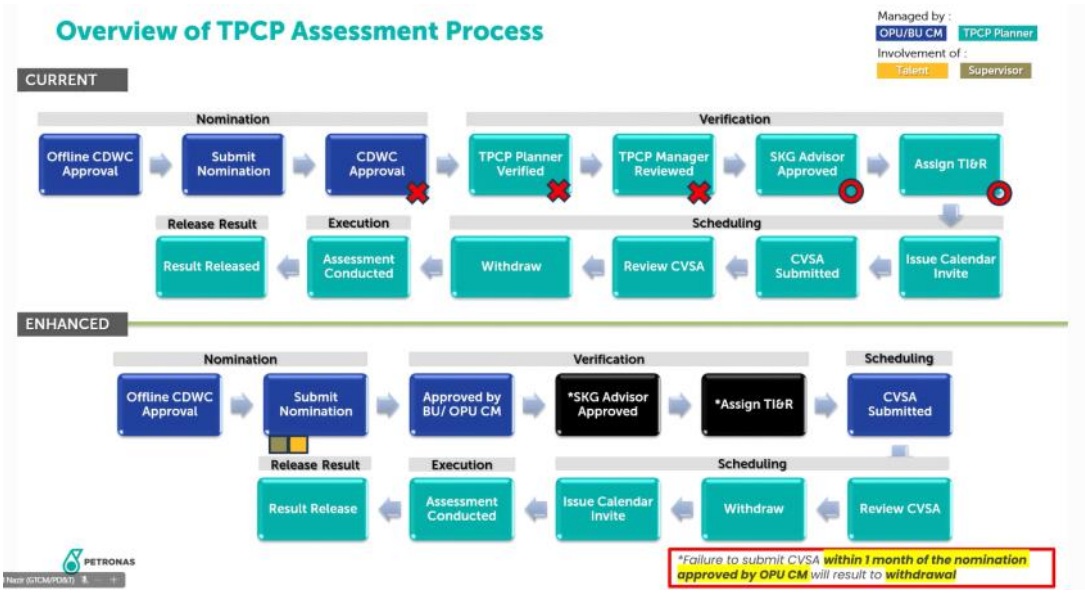
TPCP stands for *Technical Professional Career Progression* – hence TPCP Assessment is an interview/assessment session to gauge competencies of talents prior to performing TP roles

WHO CAN ATTEND TPCP ASSESSMENT?

Staff Level	Principal Level	Custodian Level
• Technical Executives : a. Achieved 80% of DI target level of the relevant job function/ discipline b. At least 1 year in P4 position • Technical Managers	For permanent staff, at least 1 year in P6 position	• For permanent staff, at least 1 year in P8 position • Work experience of at least 15 years in the related discipline. a. Tenure in Principal level minimum 3 years. b. Minimum PPA rating of 2 at least two (2) times for the previous five (5) years. c. Be PCB rating minimum "Role Model" for recent cycle

Overview of TPCP Assessment Process Flow





What to expect : Before TPCP Assessment

Candidate Roles:
- Familiarize self with the TI&R and Descriptors (*myPETRONAS*)
- Prepare CV and SA (Self Assessment) in **ASCENT-TPCP** (*https://ascent.petronas.com/tpcp*)
- Submit CV & SA in **ASCENT-TPCP within a month** upon nomination approved by OPU CM
- Compile appropriate documentations for 'evidence'

Supervisor Roles:
- Verify candidate's CV and TKH self assessment
- Make arrangement to be present during assessment (mandatory)

Have you attended TPCP assessment before 2018? If yes, kindly observe the system behavior as follows :

For 1st time candidate using ASCENT TPCP Platform:
- ASCENT TPCP is established since 2018. The changes in TI&R will have impact to the assessment results conducted prior to the change i.e. mapping of the previous assessment result to the revised TI&R.
- For the previous TPCP assessment score (before 2018), talent is required to key in his/her previous/ mapped scores into the system.
- You are required to tick/select all/selected TIs in the SA page.
- For TIs that you have closed/not plan to be assessed on, please choose the score according to current/mapped scores.
- If you choose not to write SA for above TIs, in the justification field, you may fill in 'gap closed'. The system does not allow any field to be left blank prior to submission.
- For TIs that you need to be assessed on, please include your self-rating score together with detailed justification as required.
- **It is highly recommended to write your SA for all TIs even though you have met some TIs to portray continuous development & integrated learning process from Staff to Custodian level.**

(For Reassessment candidate – no mapping needed if previous assessment using latest TI&R version (eff 1 Jan 2020))

What to expect : Assessment Day

Some guides..

Physical assessment:

- ✓ Arrive at least 5-10mins early for preparation
- ✓ Have everything you need and ready for assessment e.g TI&R, mapped results, work evidence, SA etc.
- ✓ Dress appropriately
- ✓ Assessee to uphold integrity and ensure all answer are of his/her own

Virtual assessment:

- ✓ Check in at least 5-10 mins early for preparation
- ✓ Good internet connection
- ✓ Find a quiet place
- ✓ Wear headphone to minimize noise
- ✓ No recording is allowed through any means e.g MST recording, mobile phone etc
- ✓ Switch on your video
- ✓ Familiar with MS whiteboard App in Teams/others apps e.g app.ziteboard & awwapp.com

- All TPCP Assessment will be arranged via physical mode.
- Any requests for virtual is allowable on case-to-case basis
- Time Duration : 4 hours (First time), 2 hours (Re-Assessment)

What to expect : Post TPCP Assessment

Feedback Session (*for Staff, Principal & Custodian Level*)

- Feedback session will be conducted to share assessment result and to discuss development plan.
- The session will be conducted by the assessor in the attendance of his/her supervisor (mandatory).

Assessment Result (in ASCENT-TPCP)

- Assessment result comprising TKH assessment scores and comments/remarks, Development Plan 1 (immediate & long term) and Development Plan 2 (gap analysis) will be disseminated to OPU CM. It will later be released to respective candidates and supervisors.
- **Qualified TP : Meet 80% of Base, Key, Pacing & Emerging technologies, 100% CTI**
- **Qualified Staff TP In-Role : 60% of Base, Key & 100% CTI (P4 to P5)**
- **Qualified TMTP :**

Upgrading/ Promotion Scenario for TMTP talents	Promotion/Upgrading Effective Date	
	1 April 2023 – 31 March 2024	1 April 2024 onwards
Promotion to Manager (Executive to P5)	TMTP talent progression is to refer to **GHRM L3 Progression Procedure (Item 4.1.2 and Appendix 3) via** Progression.pdf (sharepoint.com)	
Upgrading for Manager (P5 to P6)	Met **60% of Base, Key and 100% Compulsory TI (CTI)** at mid Staff Level from TPCP assessment	
Upgrading for Senior Manager (P7 to P8) & above	Met **60% of Base, Key and 100% Compulsory TI (CTI)** at mid Staff Level from TPCP assessment	
	*Based on **Talent or Position** discipline TI	*Based on **Position** discipline TI
Promotion to Senior Manager & above (P6 to P7) & above	Met **80% of Base, Key, Pacing & Emerging and 100% Compulsory TI* (CTI)** at mid Staff Level from TPCP assessment	
	*Based on **Talent or Position** discipline TI	*Based on **Position** discipline TI

Implementation & Tracking of Development Plans

- Supervisors are responsible in ensuring candidates are given the opportunity to close their competency gaps.
- OPU CM and supervisors to monitor the progress of the development plans and to discuss progress on quarterly basis in OPU CDWC session.

Important Reminders

Mockup submission

Mockup **to be completed prior nomination submission** in ASCENT

CVSA Submission

- CVSA must be submitted **within 1 MONTH** upon **nomination "approved by OPU CM"**
- First (baseline) assessment: All TI&R must be covered
- Re-assessment : All gaps must be covered to meet 80% TI&R requirement. However, we **highly encourage** talents to tick each Tis and put remarks (if required)
- Failure to submit within the given timeline **will result in nomination withdrawal from ASCENT**

Assessments

- **Internal assessments** will be conducted between **January and October 2025.**
- **External assessments (Custodian and Principal levels)** will be conducted between **June-August 2025**, final nomination must be submitted by **April 2025.**

Assessment Time

- First (baseline) assessment - 4 hours ***compulsory to attend physical**
- Reassessment – 2 hours

Reschedule or Withdrawal request

- Rescheduling/ Withdrawal request must be **approved by respective HoDs** and submitted **2 weeks notice prior TPCP Assessment (Internal)** and **3 weeks notice prior TPCP Assessment (External).**
- Once scheduled, the **cost will be borne by candidate's line department for no-show or reschedule** (for assessments involving External Assessor).

TI&R and Descriptors

Personal Development

Tuesday, January 30, 2024 11:13 AM

Feedback:

3H

Objective takleh surface -macam senior E2 , kena lebih pada development,leadership

Good thing:
Willing to do something new (ALTUM, network issue,volunteer program)
Leadership (Utk buat PML dan lain2)- Knea differentiate siapa lead,dalam SR
Kena buat something extra - Buat promotion, behave as E3 kalau senior E2.

Development plan:
Focus TPCP assessment. Start preparing details. Kena tahu lagi details. Buat Mock awal2. Susun strategy ,tanya senior utk susun ,plan
Work prioritization: Susun buat light2 ,dulu2.lead project,

Department

Monday, January 20, 2025 9:51 AM

To order food

https://www.kopetrocatering.com.my/index.php/menu-for-klcc/

KOFAC

https://gfspd.petronas.com/pdweb-app-p30/pd/pdenter.do#1727849251369

Vendor Number
3000004850

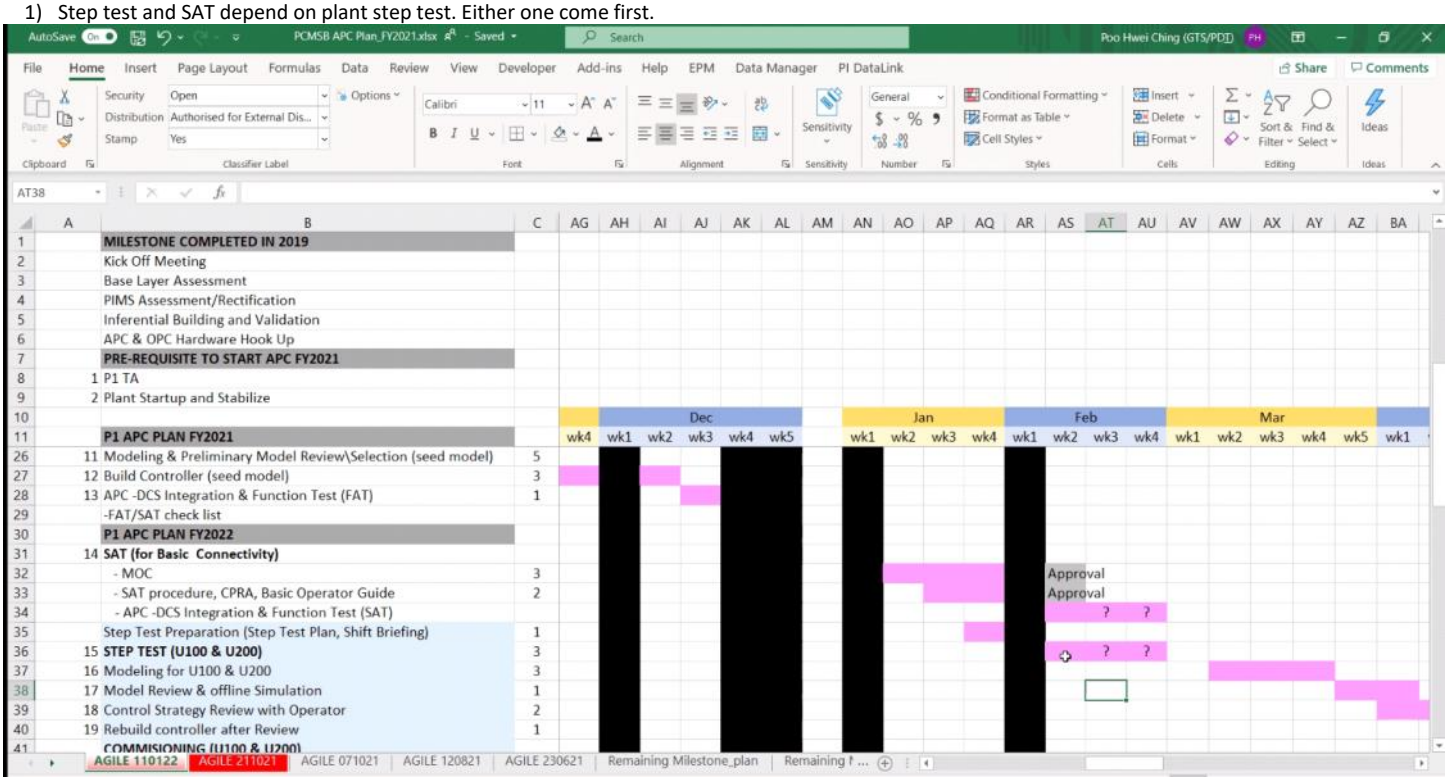
G/L

GLrefreshment- 50002000

Tuesday, January 11, 2022 2:52 PM

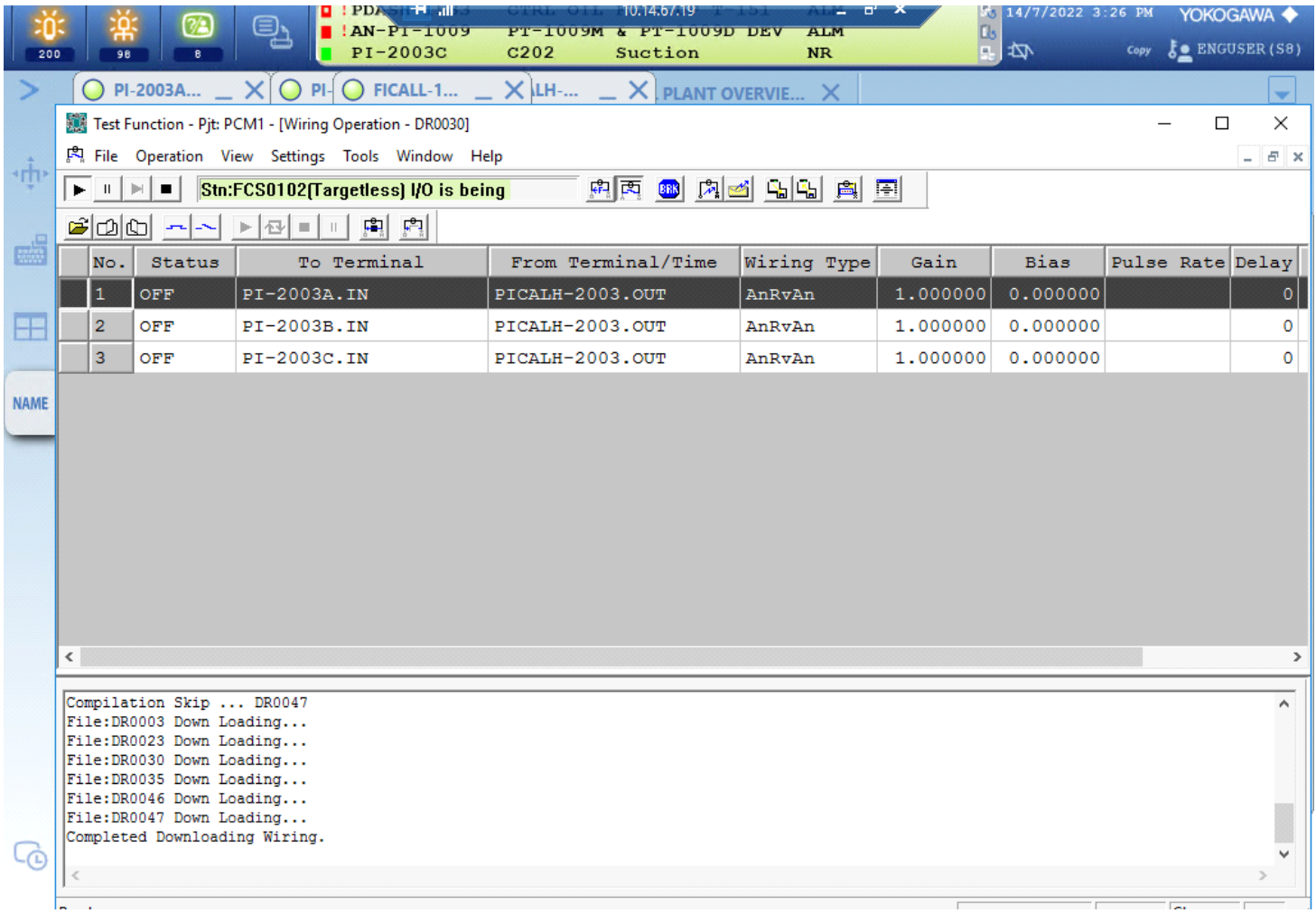
Planning for 2022

1) Step test and SAT depend on plant step test. Either one come first.



DCS Config

Thursday, July 14, 2022 3:26 PM



No.	Status	To Terminal	From Terminal/Time	Wiring Type	Gain	Bias	Pulse Rate	Delay
1	OFF	PI-2003A.IN	PICALH-2003.OUT	AnRvAn	1.000000	0.000000		0
2	OFF	PI-2003B.IN	PICALH-2003.OUT	AnRvAn	1.000000	0.000000		0
3	OFF	PI-2003C.IN	PICALH-2003.OUT	AnRvAn	1.000000	0.000000		0

How to break connection. Kalau the reading keep changing.

Network Troubleshooting

Wednesday, September 7, 2022 9:54 AM

Command

Ping 10.xx.xx.xx
Telnet 10.xx.xx.xx. Xxxxx(port number)
Netstat -an (check port established listening
Route print (to get info--persistent route)

APC-OPC -->new persistent route
APC --HMI-->

Eric
1)Persistent route enter in site,make able to communicate .should not be a standard practice. Should put a default gateway. APC yang problem.So, put subnet in the persistent route.

Should be applicable to another HIS. (Network segmentation)
After restart, we may need to add in the persistent route again.or can delete at TCP/IP properties permanently.

2)IIS (Internet Information Services)
No read and write permission for GROUP..Need to check in the setting as well.
Web application is using IIS .Need to check user authentication.

3)Level IT Security -
No blocking of the firewall. Just IT security, disabled personal firewall, user related policy.

4) TCP:80 is more important

PACE POV Validation

Thursday, February 23, 2023 10:08 AM

23/2/23 POV Validation class by Cheryl

POV = IV+CV +POV = Process Output Value. Contoh POV not IV/CV is the close loop function.SV to PV/MV
1)Predition
2)Feedback to APC
3)Calculate innovation (Error) Difference btw Error prediction and actual.

IV Cutshort the delay btw MV and CV . IV can be controlled or not

POV validation = to check whether POV correct or no.

<u>Validation:</u>
1)limit violation
2)flatline detection
3)spike rejection
4)mean shift

<u>Type of timer:</u>
1)Grace timer (generic timer)
2)Flat timer - triggered by min deviation
3)Max change timer - triggered by max deviation
4)prediction timer(generic timer)
5)recovery timer(generic timer)

<u>Engineering unit</u>
1)max deviation
2)max deviation

<u>Limit setting</u>
1)validation limit (H/L) (limit for operating limit-transmitter span)
2)Prediction limit (for model output)

Scenario:
Kalau dah trigger flatline,dalam grace time,APC akan guna prediction.(prediction time is the time given to use prediction

Set all prediction,flattime, grace time all the same. It can detect which one to trigger fisrt. Better use same figure for all

PML2

Friday, March 3, 2023 11:26 AM

PML2:

Properties of interest
carbon number
excess O2 (not aries model)
reformer slippage
ATR methane slippage

6months data
-unbiased
-biased prediction
-Lab data and time

To find:

1)How much we can get benefit
2)Which are the fasterst route

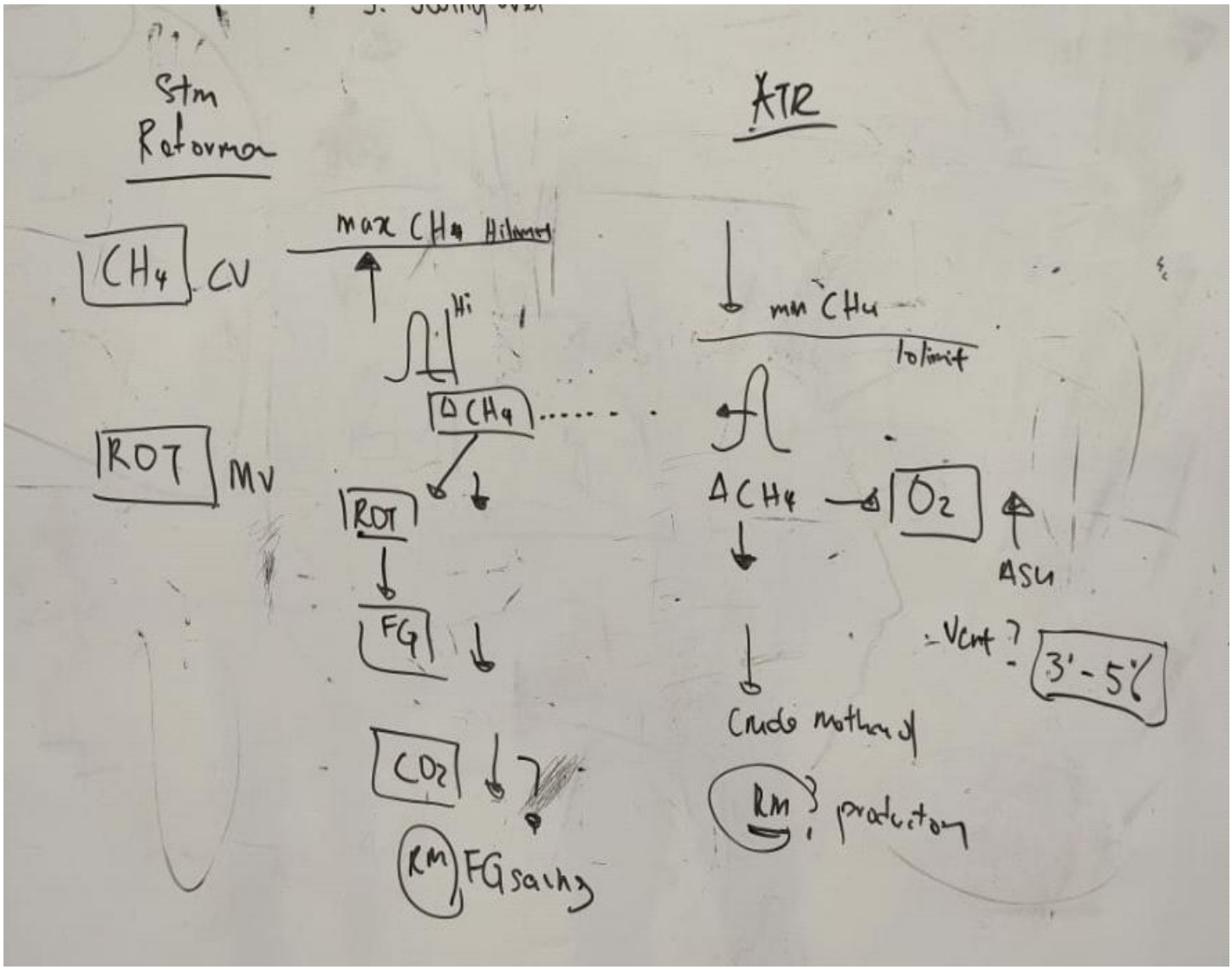
Feasibility study:
BLCA
Benefit analysis (methane slippage --> NG FG,dan production)
Validation (methane slippage)
Prelim FDS

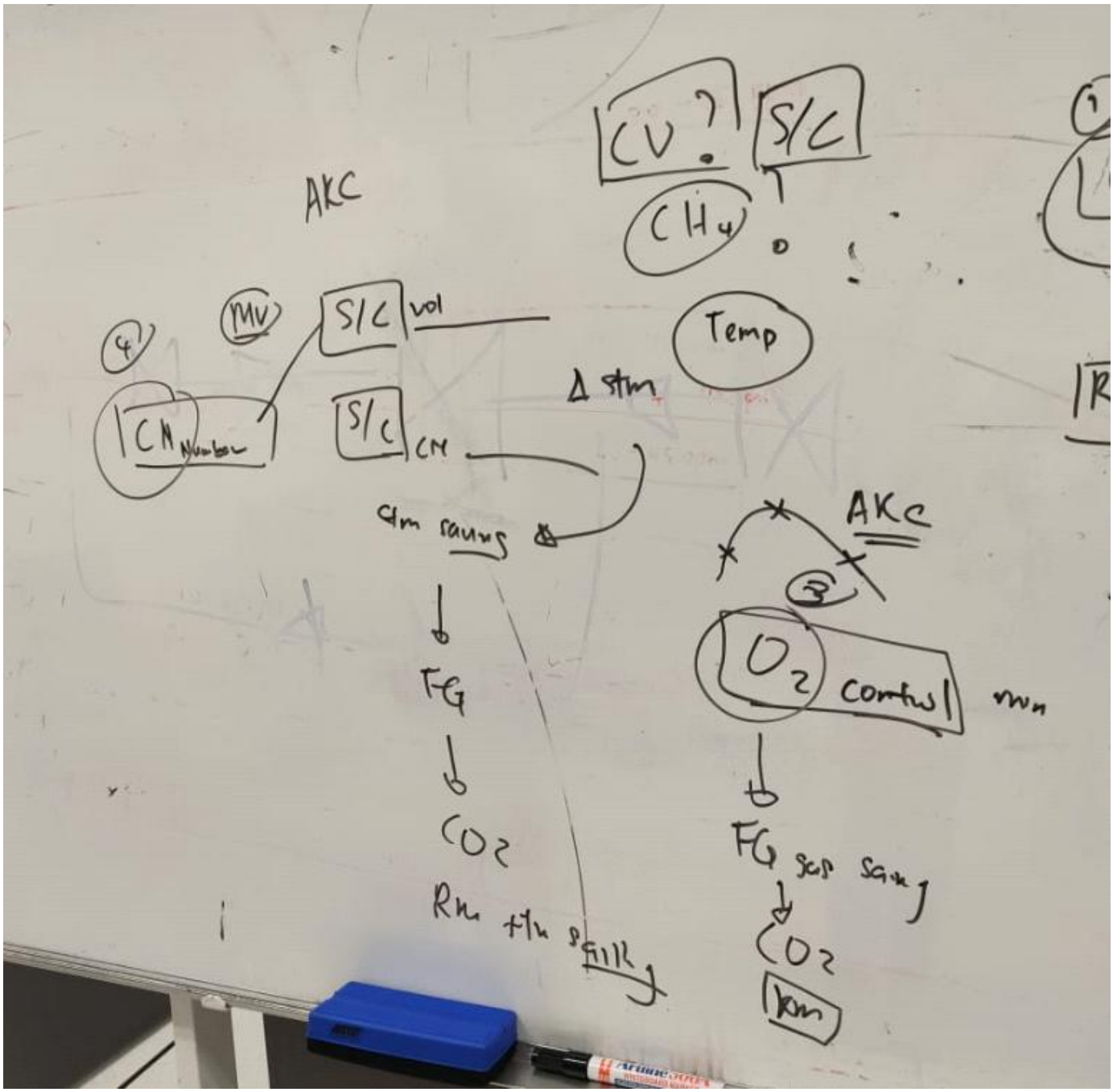
NG-SR - hilda
ATR to ASU - amin (methane slippage validation)

Note:

Refer Engineering Design Manual - See Chapter
2.1
2.2
2.12
RA can refer 2.7

Strategi for PML2


Stm Reformer
ATR
CH4 CV
max CH4 Hi limit
Hi
ΔCH4
ROT MV
ROT
FG
CO2
RM FG saving
min CH4
lo limit
ΔCH4
O2
ASU
Vent ?
3'-5%
Crude methanol
RM ? production



Utk FDS explore:
ASU -MAC opening,top right, push bila malam,reduce bila siang,dan fokus pada O2 vent
PSA - check mana point demand dan kaitan dengan LP Vent

TC2101 - in MAN, because don't want to fluctuate Methanol to methanol separator
If 5bed, PSA tail gas maybe tak feasible.

Boiler
140PC1501 - Main Pressure control - to fuel gas
140PC1504 - Pressure control to vent
240t/h - capacity for Aux Boiler. Currently operating at 100t/h

APC Commissioning

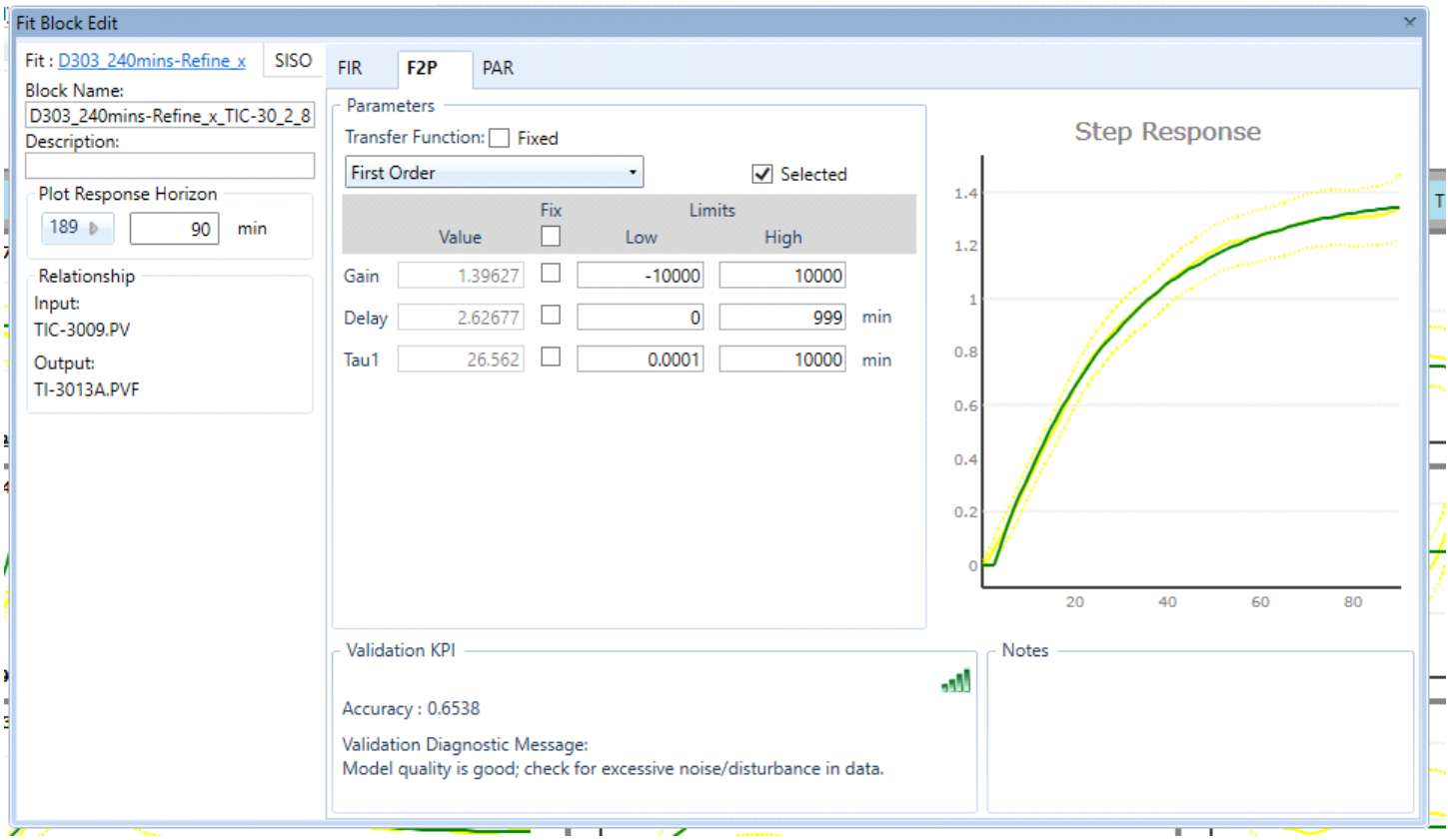
Monday, November 6, 2023 3:43 PM

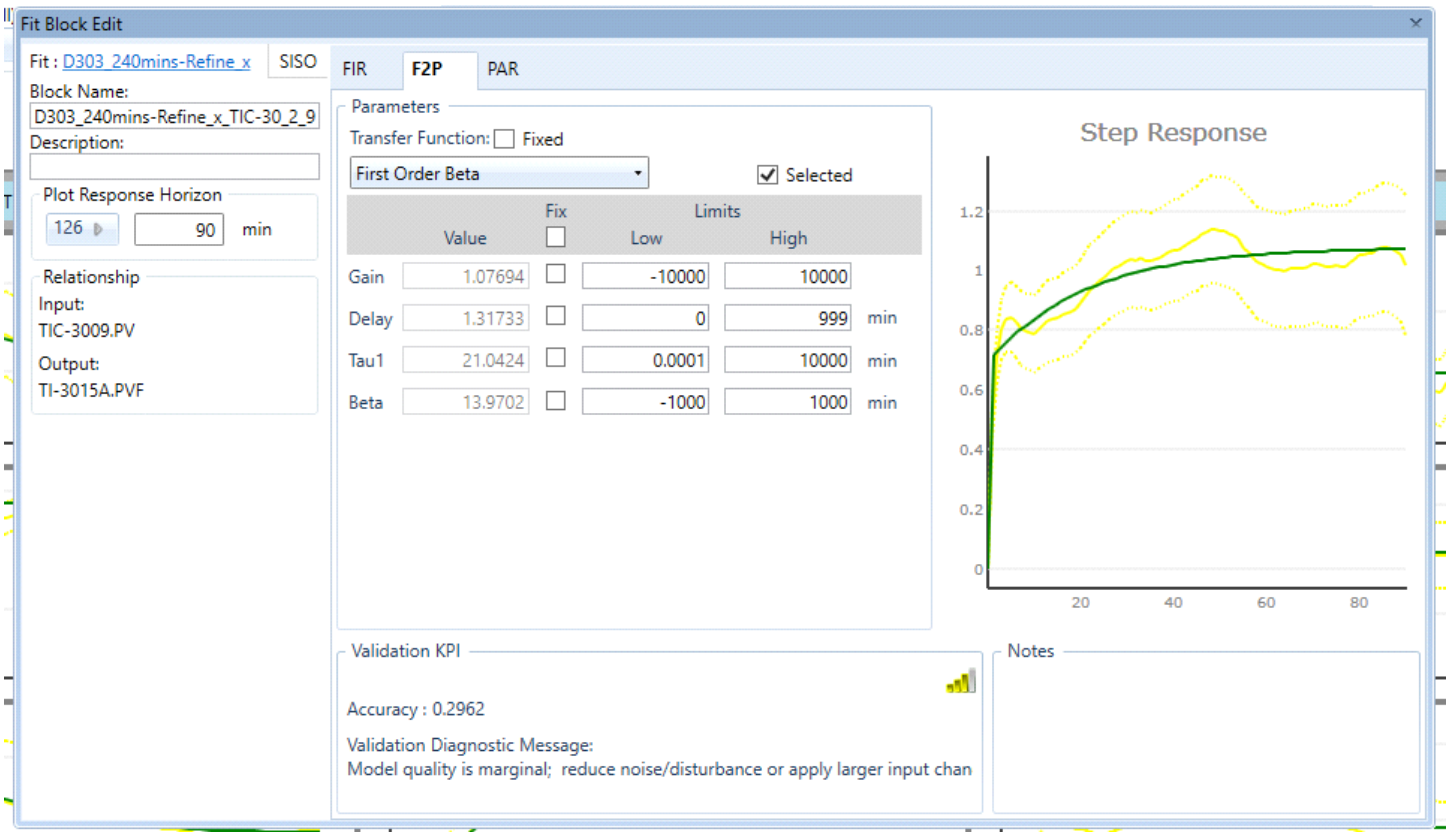
Filter:

1) Kalman Speed : 1--> 0.1
2) Event threshold: 10000 --> 5/0.05 ..once the different is greater than this number, event is triggered

If we change filter time, we may need to adjust/refit our model again. If first order,can simply add to time constant. If 2nd order, need to revert

To rectify:
1)auto start -MV
2) LOGIC - 2 MIN for auto off D303
3) BUANG Ambient temperature




Fit Block Edit
Fit : D303_240mins-Refine_x
SISO
FIR
F2P
PAR
Block Name:
D303_240mins-Refine_x_TIC-30_2_9
Description:
Plot Response Horizon
126
90
min
Relationship
Input:
TIC-3009.PV
Output:
TI-3015A.PVF
Parameters
Transfer Function:
Fixed
First Order Beta
Selected
Fix
Limits
Value
Low
High
Gain 1.07694 -10000 10000
Delay 1.31733 0 999 min
Tau1 21.0424 0.0001 10000 min
Beta 13.9702 -1000 1000 min
Step Response
1.2
1
0.8
0.6
0.4
0.2
0
20
40
60
80
Validation KPI
Accuracy : 0.2962
Validation Diagnostic Message:
Model quality is marginal; reduce noise/disturbance or apply larger input chan
Notes

PML Plant 1 U300 Commissioning

Tuesday, November 21, 2023 9:35 AM

What Arthur Did in last visit:

1) Remove the transformation
2) Adjust the gain for inferential - refit the inferential

Best Practise

1) Lab Data/Process - guna actual time
2) Load lab data as time specificied. Process data load 1 min data. Let controller run terus. Apply lag time for inputs

Adjsut qlx - V14 to V15
CL-3001 - change to None instead of basic
TI3005 - change to None
PI3008 - change to None

Wayforward 20 Feb

Tuesday, February 20, 2024 10:05 AM

1) Reupload POV with feedback.

Changes made by Nina
:

[Tuesday 11:36 AM] Noor Amanina Ghazali (GTS/PD&T)
yg version sebelum remove kalau amin nak nnt bgtau je

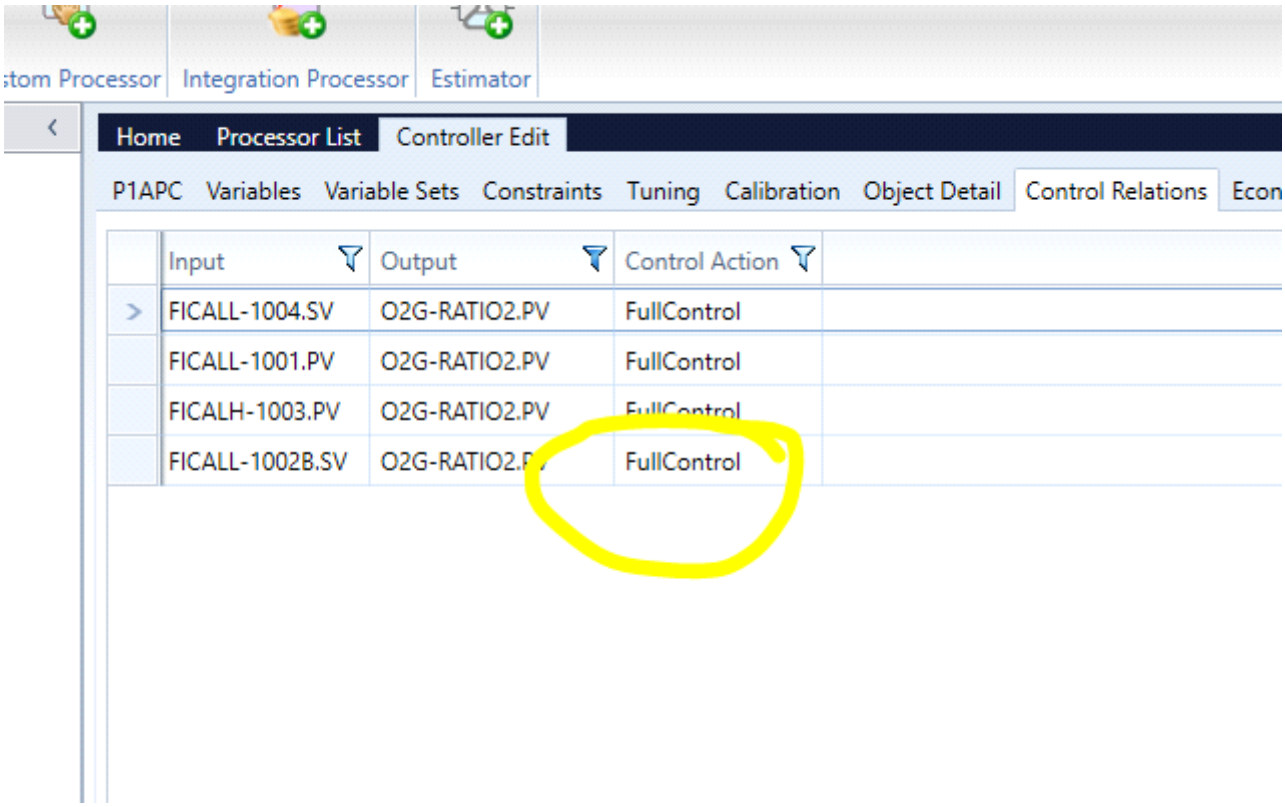
Housekeeping DesignTime (settleddd)

1. Datalink to include SQCL0208
2. Remove reflux ratio from CVs Variable Set list
3. Remove at Event Logic [To shed P1APC Controller when APC Filter is OFF]
4. Re-set Event Logic FIC10071008OFF-2 from ModeActual to ModeRequest.
5. To remove PC1005 and PIC1005B from MV list in variable set
6. Typo to correct PeRunDist to PreRunDist
7. Set Hi Lo Limit in different Runtime Data Source
8. Add DVs other than the 2 (Reforming) 7 newly added.

Pending

- Compile list to send to Jong for Pi tags creation

like 1
P1APC_20240213_V19.QLX



PCEPE EMICON-Not Hafiz Kedat
Amend new controller
Scehdule for C402

New controller:
Change Control Action from Full Control to Prediction
Typo to correct PeRunDist to PreRunDist

Disable/Delete finfans related
Buka TI-3013 max deviation

Administration

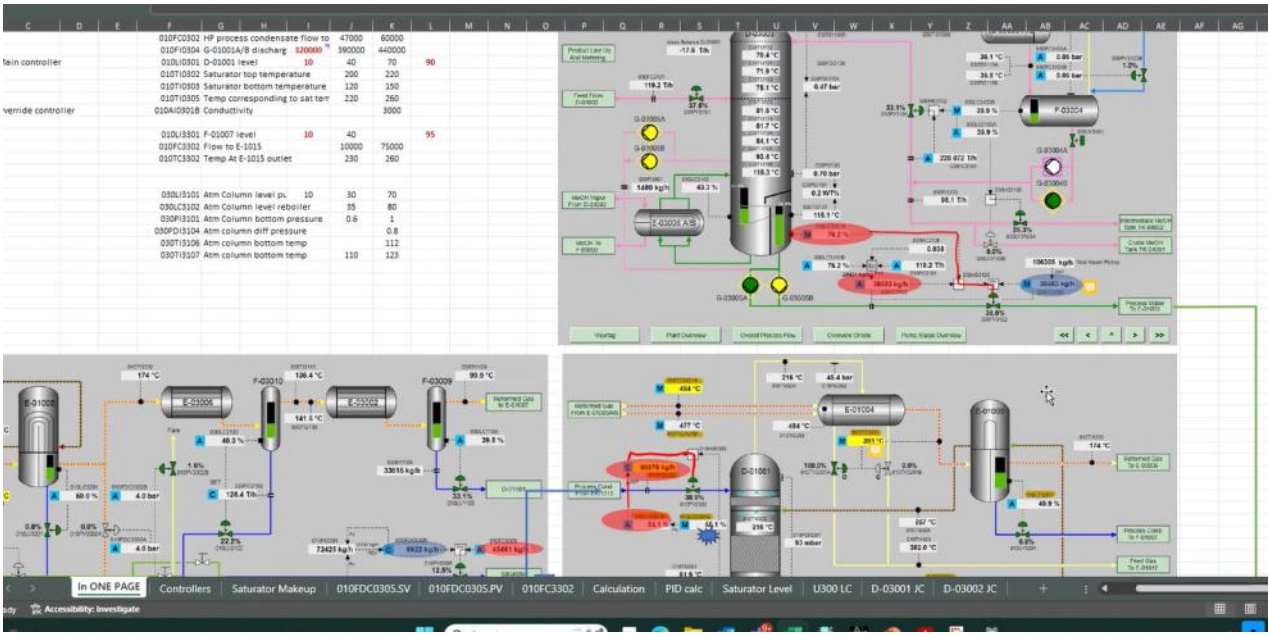
Monday, May 20, 2024 2:12 PM

[9:05 AM] Hilda Koh Kai Shing (TSD/PC Methanol)

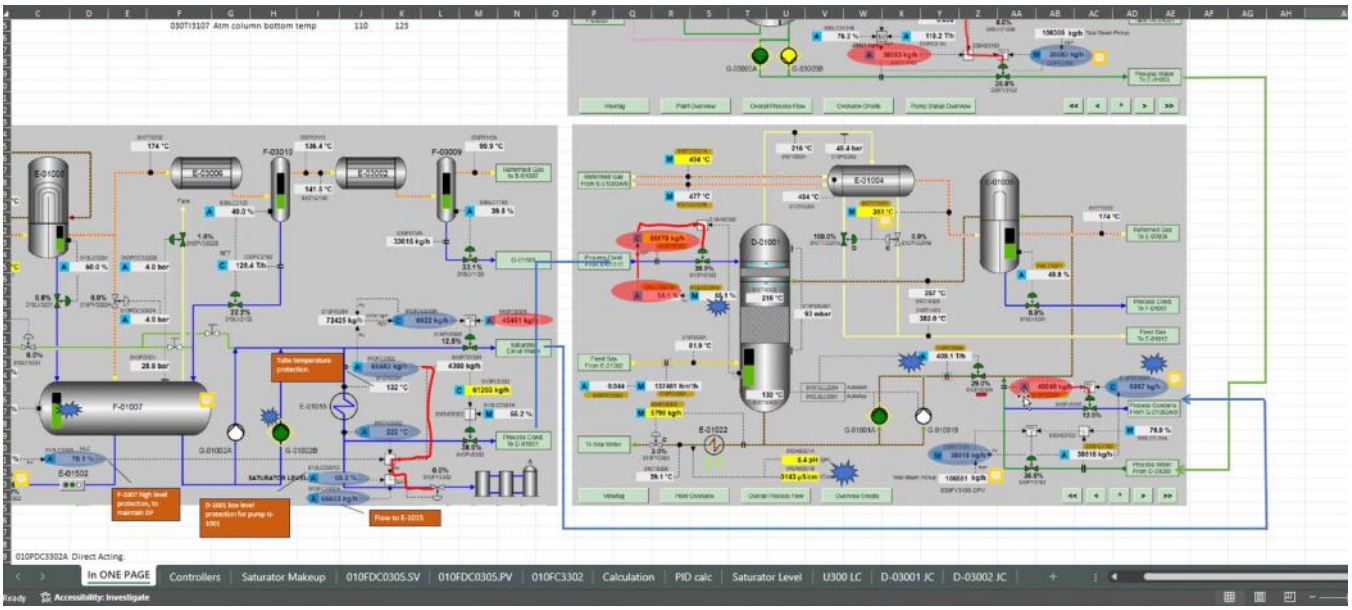
P.240160001.16.1001
WBS Code for Plant 2 APC Implementation

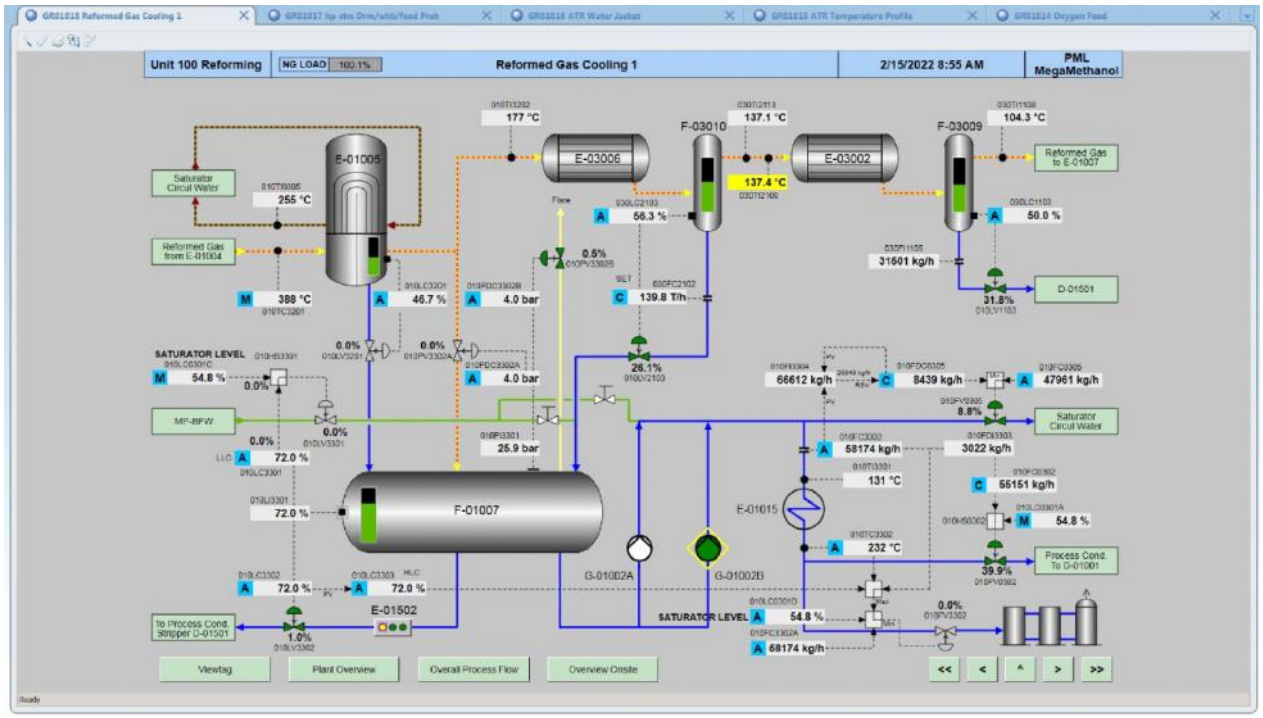
Plant 2 modification

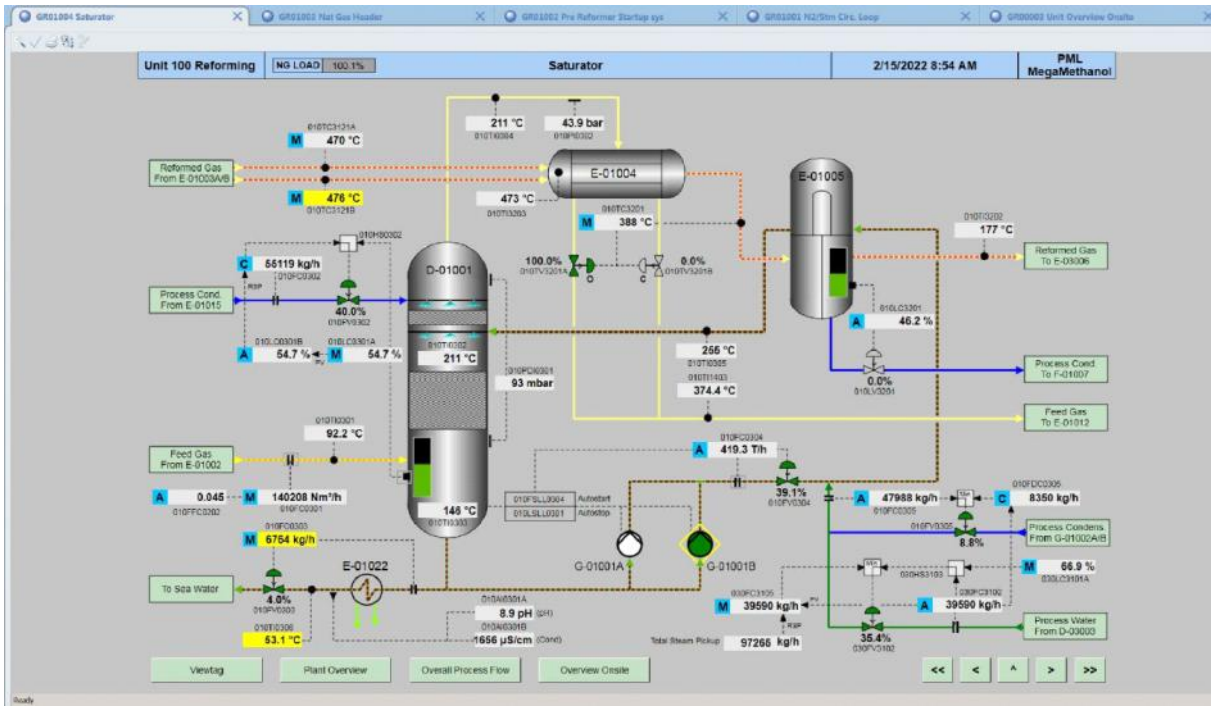
Thursday, September 5, 2024 2:43 PM

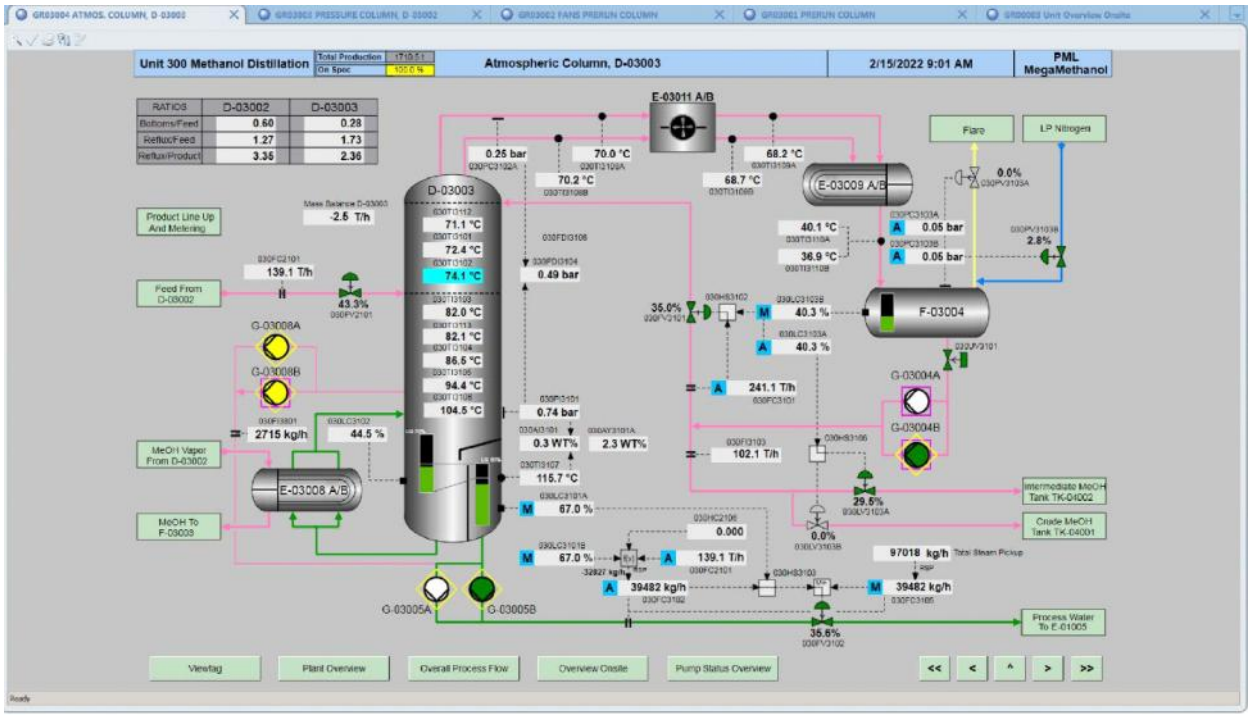


	010FC0302	HP process condensate flow to		47000	60000	
	010FI0304	G-01001A/B discharg	320000	390000	440000	
ain controller	010LI0301	D-01001 level	10	40	70	90
	010TI0302	Saturator top temperature		200	220	
	010TI0303	Saturator bottom temperature		120	150	
	010TI0305	Temp corresponding to sat tem		220	260	
verride controller	010AI0301B	Conductivity			3000	
	010LI3301	F-01007 level	10	40		95
	010FC3302	Flow to E-1015		10000	75000	
	010TC3302	Temp At E-1015 outlet		230	260	
	030LI3101	Atm Column level pi.	10	30	70	
	030LC3102	Atm Column level reboiler		35	80	
	030PI3101	Atm Column bottom pressure		0.6	1	
	030PDI3104	Atm column diff pressure			0.8	
	030TI3106	Atm column bottom temp			112	
	030TI3107	Atm column bottom temp		110	123	

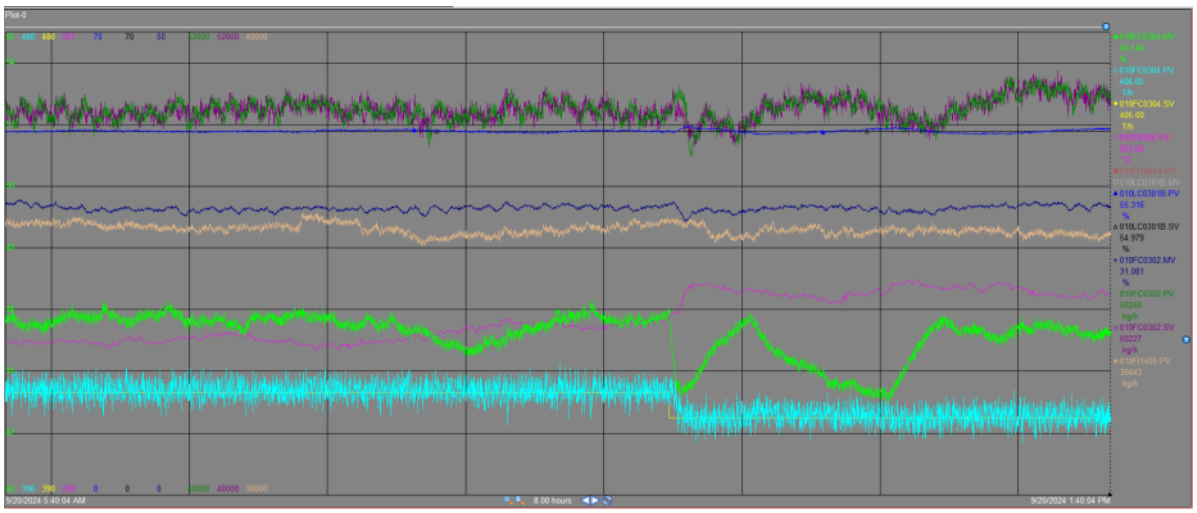


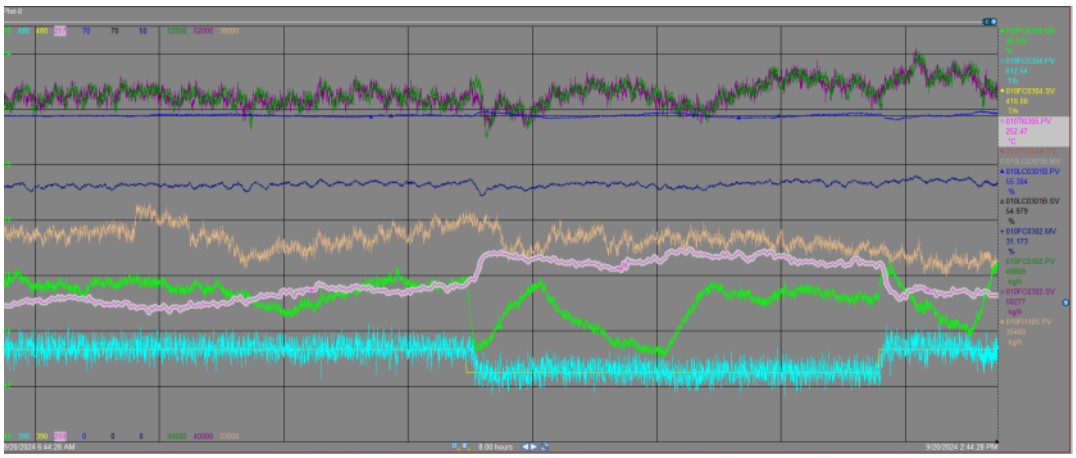

Unit 100 Reforming
NG LOAD 100.1%
Reformed Gas Cooling 1
2/15/2022 8:55 AM
PML MegaMethanol
E-01005
E-03006
F-03010
E-03002
F-03009
Saturator Circuit Water
Reformed Gas from E-01004
Reformed Gas to E-01007
D-01501
SATURATOR LEVEL
MP-BFW
F-01007
E-01015
G-01002A
G-01002B
E-01502
To Process Cond. Stripper D-01501
Process Cond. To D-01001
Viewtag
Plant Overview
Overall Process Flow
Overview Onsite


Unit 100 Reforming
NG LOAD 100.1%
Saturator
2/15/2022 8:54 AM
PML MegaMethanol
E-01004
E-01005
D-01001
Reformed Gas From E-01003A/B
Process Cond. From E-01015
Reformed Gas To E-03006
Process Cond. To F-01007
Feed Gas To E-01012
Feed Gas From E-01002
Process Condens. From G-01002A/B
To Sea Water
E-01022
G-01001A
G-01001B
Process Water From D-03003
Viewtag
Plant Overview
Overall Process Flow
Overview Onsite



Rp >100-->0.1??





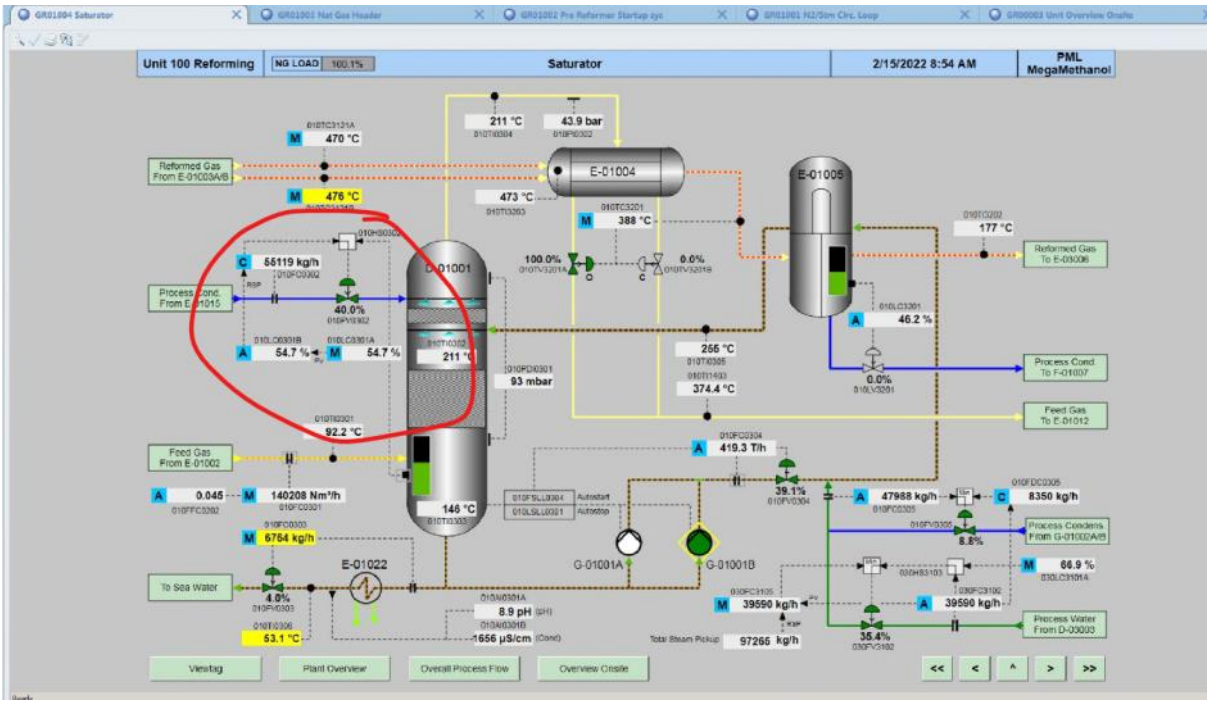
Post commissioning - Reautomation Acticity

FC3102 = 1014AM , 27Feb2025
PB --> 250 -- 100
I--> 1100 -- 2100

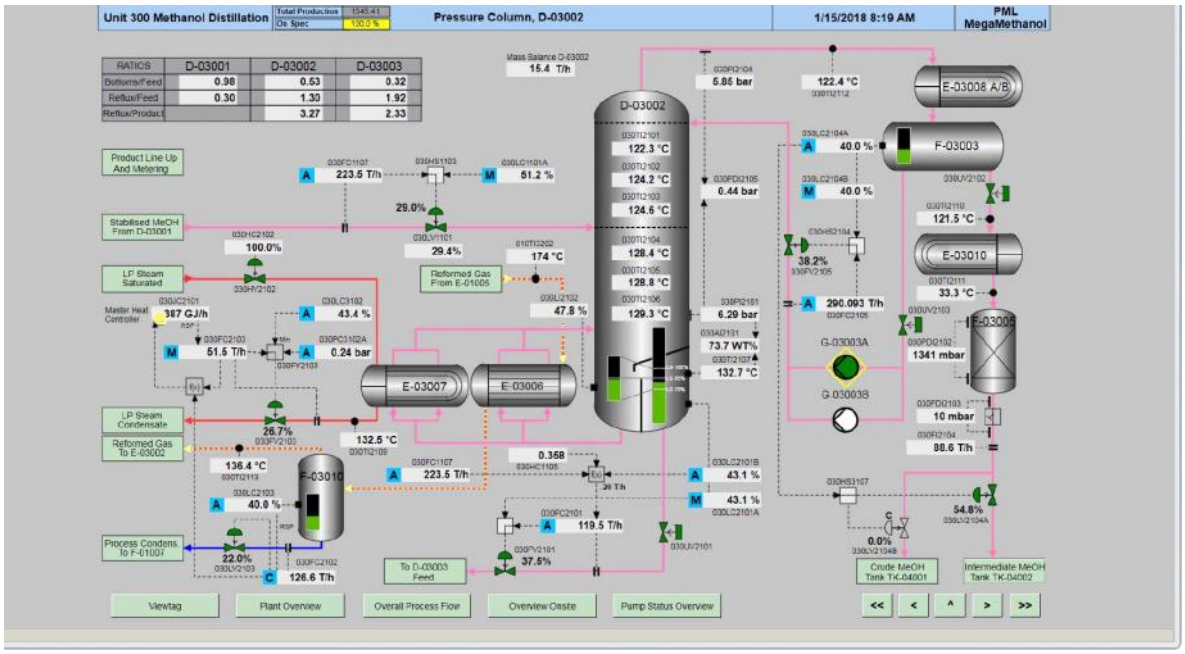
Need to check before commissioning,

1) 030LC3102 - nee to be lower than 46.5
2) Feed to stripper is in CAS

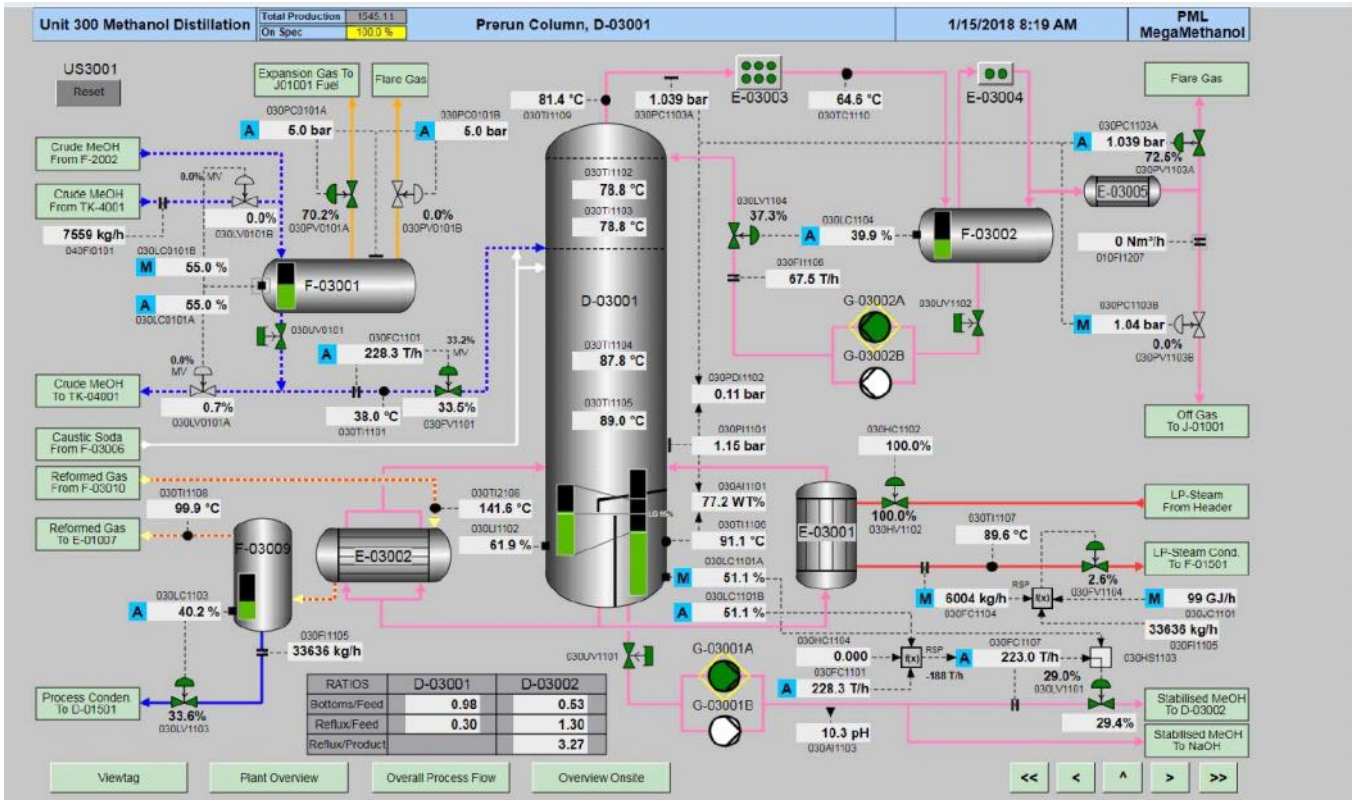
3)



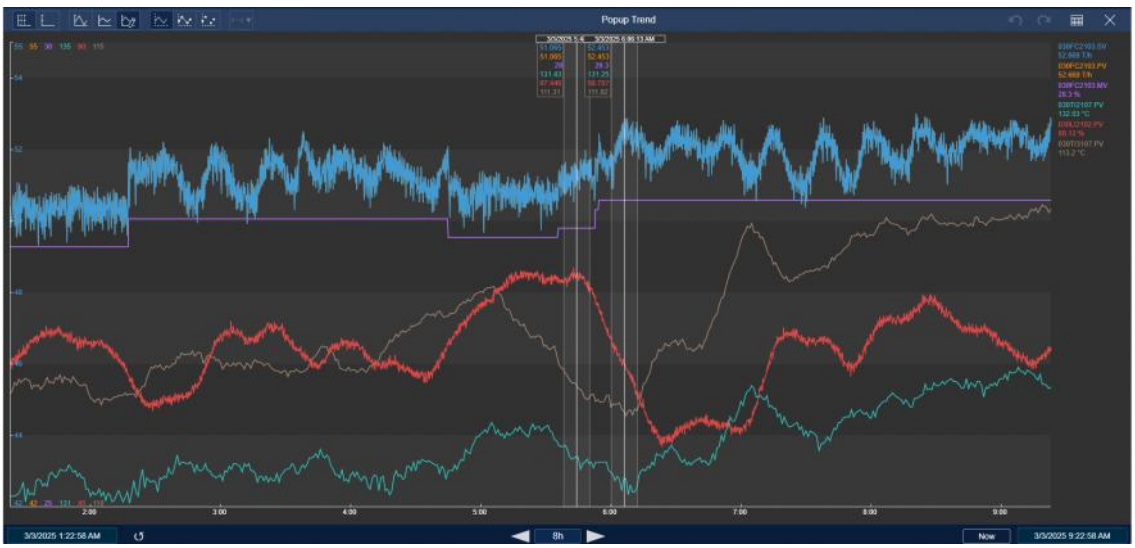
D3002 Level Commissioning



D3001 Commissioning



D302 Duty Controller



0.3% MV = 0.5 t/h

Low MV = 27.7
High MV = 28.8
SV adjustment : 00.2 t/h

Current tuning = 450 / 27 -- 550 / 27 FINAL

JC2107

MH = 54
ML = 50

17/3/2025

1) Target increasekan filter time JC2107
2) Retune level

To do trend:

030FC1101
030LC1101
030FC11107
030LC2101
030FC2101
030LC3101
030FC3102

22July 2025

LC0301

- Soft clamp is applied
- MH = 42500 (original: 66000)

- ML = 36500 (original: 0)

030LC2101
- Soft clamp is applied
- MH = 150 (original: 200)
- ML = 121 (original: 0)

Admin

Friday, September 13, 2024 4:14 PM

P.240160001.16.1001
WBS Code for Plant 2 APC Implementation

Operator Training PCMSB

Friday, November 15, 2024 9:08 AM

Attendance:

1. Hisham - TSD Manager - PML 12 tahun 2012 (Offsite OE)
2. Daud - Process TSD - 2 tahun
3. Wan Hafizuddin - Abu - Backend panel - 15 years
4. Rahim - Im - Front End - 10 tahun
5. Zamir - Front End Panelman
6. Safiie - IJo - 13 tahun
7. Freddy - Backend - 13 tahun
8. Foo - Trainer Plant 2 - Plant 1 15tahun
9. Chindara -TP -start 1994
10. Rizal - Backend panel
11. Izham - Front End panel 10
12. Cheryl -
13. Josephine Hanna - GEES
14. Joey -TSD GEES
15. Seah -
16. Hilda - 15 years
17. Aminuddin -
18. Amanina -

For training pack improvement:

1) Put in key take aways dan objectives
2) Slide 51 - betulkan notation MV DV
3) Copress how to turn ON and what will see.
4) Slie 115 --> DOE to DBE

- Generate work proposal to PML as soon

Attendance:

(27/11/2024)

1. Hilda
2. Nina
3. Amin
4. Rostam (Panelman - Front End)
5. Rusmadi (PESOC - 15 TAHUN - Technician -Offsite (Madi)
6. Roddy - Front End - 17 tahun
7. Baharuddin - Budin -Panel Front End -22tahun
8. Keong - Panelman - 21 tahun, Front End panel
9. Irwan - HD Production - 19 tahun - Operation
10. Sahdan - TA -
11. Allice
12. Javier

1)Confirm Reliability of GC, to further reduce S/C
2)consider analyzing Etoh only,to reduce analysis time.
3)Push higher - one higher, one lower - to push combined higher

4) Ask field operator to inform panel on the exact sample timing.
5) Reintroduce practice for field operator to panel before taking sample

- To attach matrix dalam OP ,with the proposed hi and lo limit

PEMS PCMSB

Thursday, November 28, 2024 3:40 PM

1) Brief numbers of audit - 3 RAA and 1 RATA (GTG bulan 4-catalytic converter installation)
2) Plan when to audit - Faze to propose

Unit	Q1 2024 (RATA)	Q2 2024 (RAA)	Q2 2024 (RAA)	Q2 2024 (RAA)
Plant 1 S101	26 – 28 Feb	13 - 14 May	18 - 19 Sep	18 - 19 Nov
Plant 2 S14001	29 Feb – 1 Mar	14 - 15 May	19 - 20 Sep	19 - 20 Nov
Plant 2 XT07002	2 – 3 Mar	15 - 16 May	20 - 21 Sep	20 - 21 Nov

From <https://teams.microsoft.com/v2/>

1) Budget allocation and proposal - usually dalam 350k
2) EMICON? - to ride on same data collection.

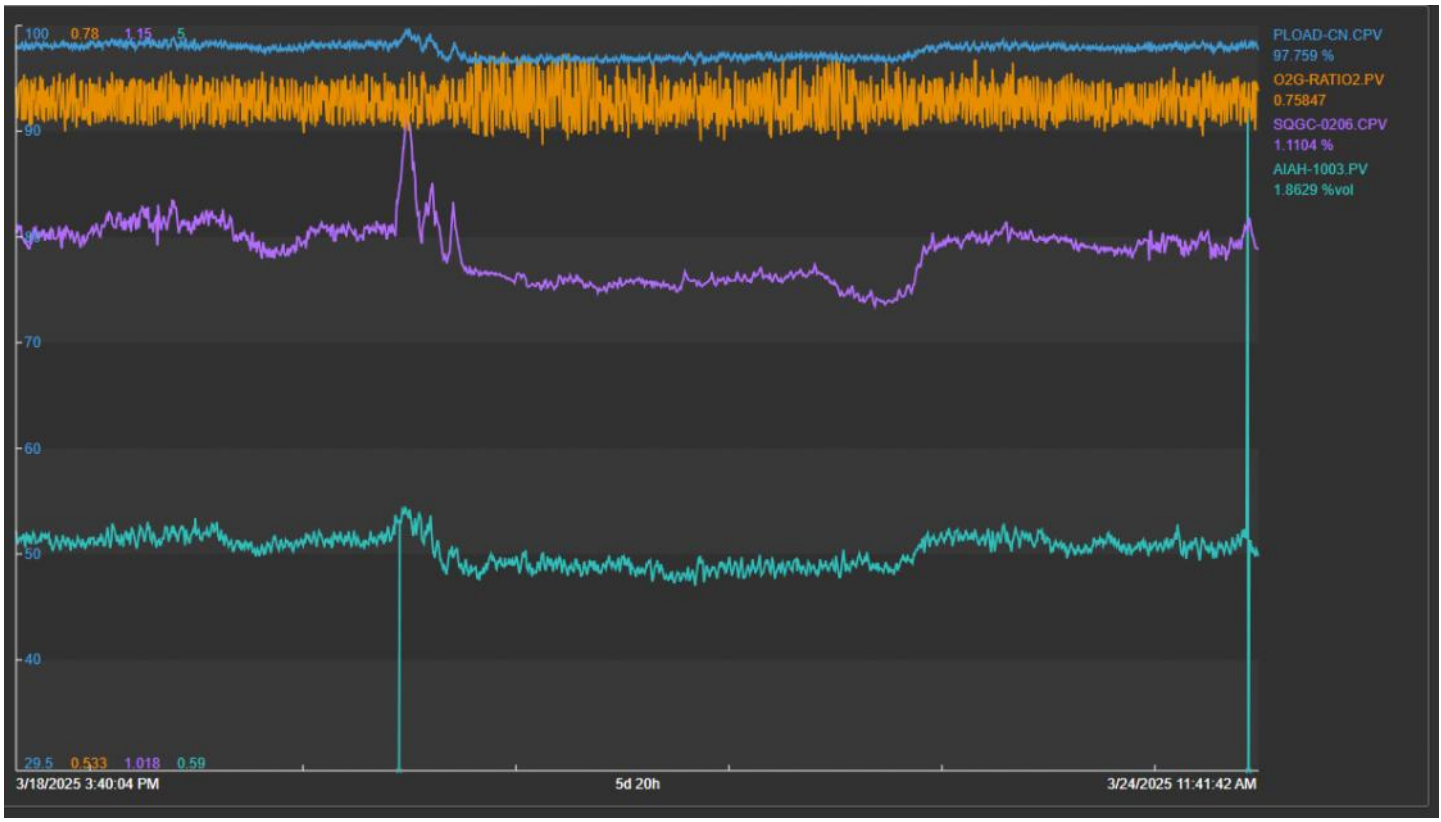
Issue PML

Monday, March 24, 2025 11:06 AM

1) High temperature ATR - Alumina lump is installed higher than required. Temperature is higher by 40degC. Vaporization occur, and goes downward. Effect catalyst ,deactivate the catalyst. Less reaction,not absorbing heat and cause temperature high . Uneven flow (channeling) 1009 High temperature (1060DEGc). Reaction happen mostly at 1007 , 1008(960degC)
2) TIC-1035 temperature keep increasing (foulant build up)

1. B101 hot tubes – Limitation of COT – not optimized. Split between B101/R101 by design 52/48, current 53/47.
2. Insufficient combustion air – Need rely on P2 steam import to reduce Boiler load to enable sufficient combustion air to B101 & FGD
3. TIC-1035 temperature keep increasing (Indicate foulant build up), the rate was faster compare to TA 2024, 2017. Latest 460 DegC, limitation 475 DegC. TV-1035 remaining 5% yet to be fully close
4. Insufficient Oxygen to ATR, ASU design to provide 24750 but now only can get 24700. P2 not
5. Lower oxygen purity compared last time (Now 98.3% vs 99.3% last time)
6. Potential FV-1001 instability at higher opening
7. LV-1001 suspected clogged/mech part damage – Utilize the bypass valve now
8. Low SN number at synthesis loop – since after Mid Dec 2024 startup after water interruption – Suspected reaction shifted/lab GC problem in measuring the composition (Note: at synloop inlet, observed CO2% increasing, H2% reducing, CH4% increasing – Expected due to FE high slippage, and when CO up SN reduce and vice versa)
9. If P2 pitstop in May later, P1 will reduce load to 98%
10. GC1 and GC2 GRT difference in carbon number measurement, according to SBA, to refer GC2 if bidi no open, if Bidi open then take GC1 reading—Hard to calculate theoretical production volume
11. D303 overhead temp and pressure sensitivity – Very sensitive during weather change – new boiler with good heat transfer efficiency
12. FV-2101.1/2 antisurge issue – Awaiting rectification – Concern during upset
13. F201 high pressure, indirectly performing the catalyst squeezing now. E205 bypass already open but not helping much, current parameters is the best can get
14. PSA instability at 4/5 beds. Few types of alarm triggered suspected valve passing, AWSD opportunity.

Carbon number reduce, less for the reaction , AI1003 pun akan turun. COT akan naik. FIC1004 tak gerak.
o2/gas ratio tak clear sangat..



B1001 as much as possible, to get H2 as well. FIC1001 can push plant load, FIC1003 can use to trim number for Split. But for >100% P2RD mode , change to 48/52%

Simulation PML

25 June 2026 08:27

-when carbon number change
-when B101 limit deviation (FGD,Excess O2, pressure DV)
-when there is opening PIC2003.MV

Longer flame,akan cause inpingiment at tube.
Carbon number increase,the whole loop akan sejuk

If carbon number turun,pload-cn akan turun..akan jadi panas,akan push B101. boleh push load higher.
B101-for hydrogen production..ATR produce more CO

1411 - 1027 =9- 13bar
40-26.8 = 13.2

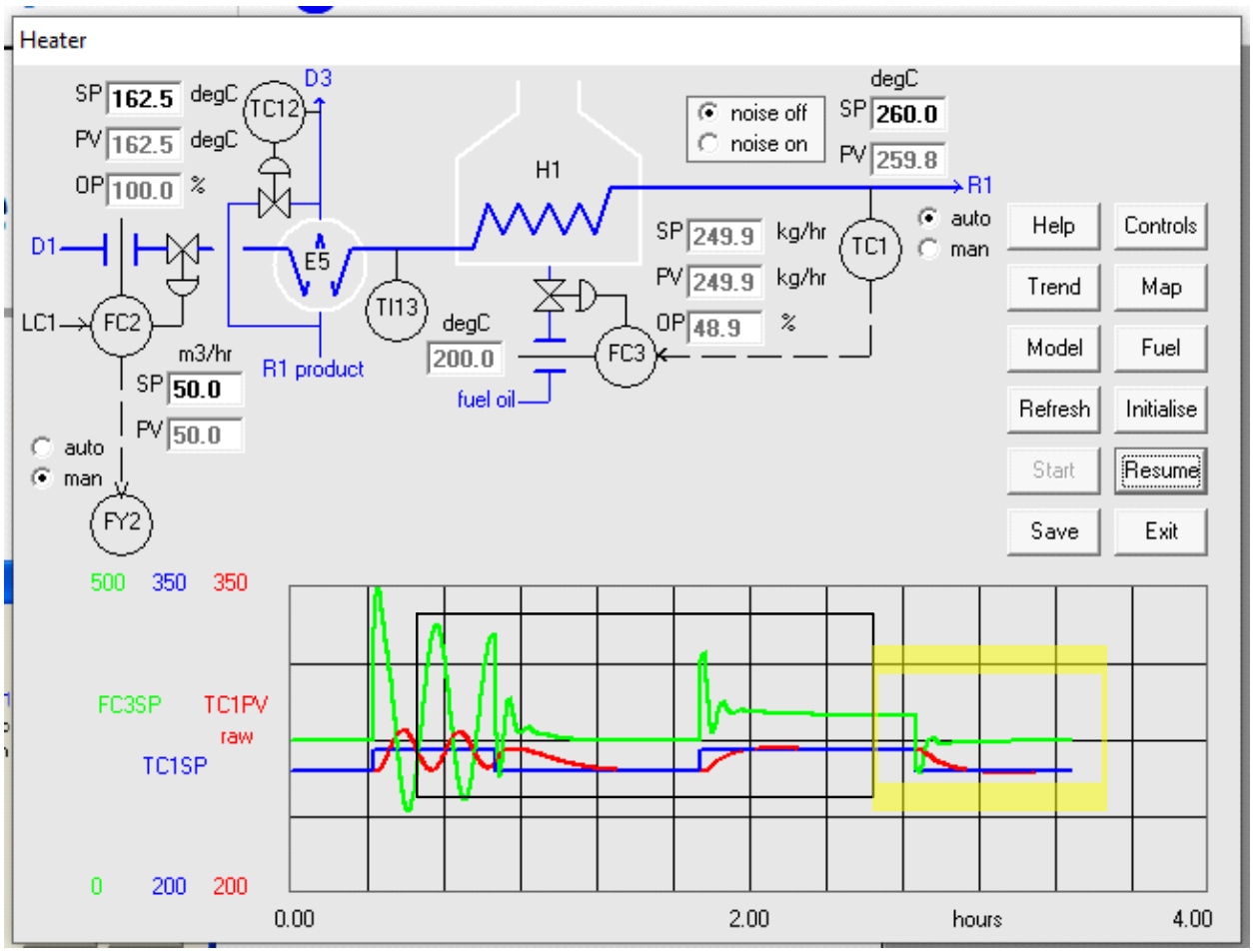
PIC1411..If plant load change(reduce), opportunity to reduce the pressure,as the valve opening initially will reduce,thenvalve openinng will increase again.

Setpoint is higher priority than high limit

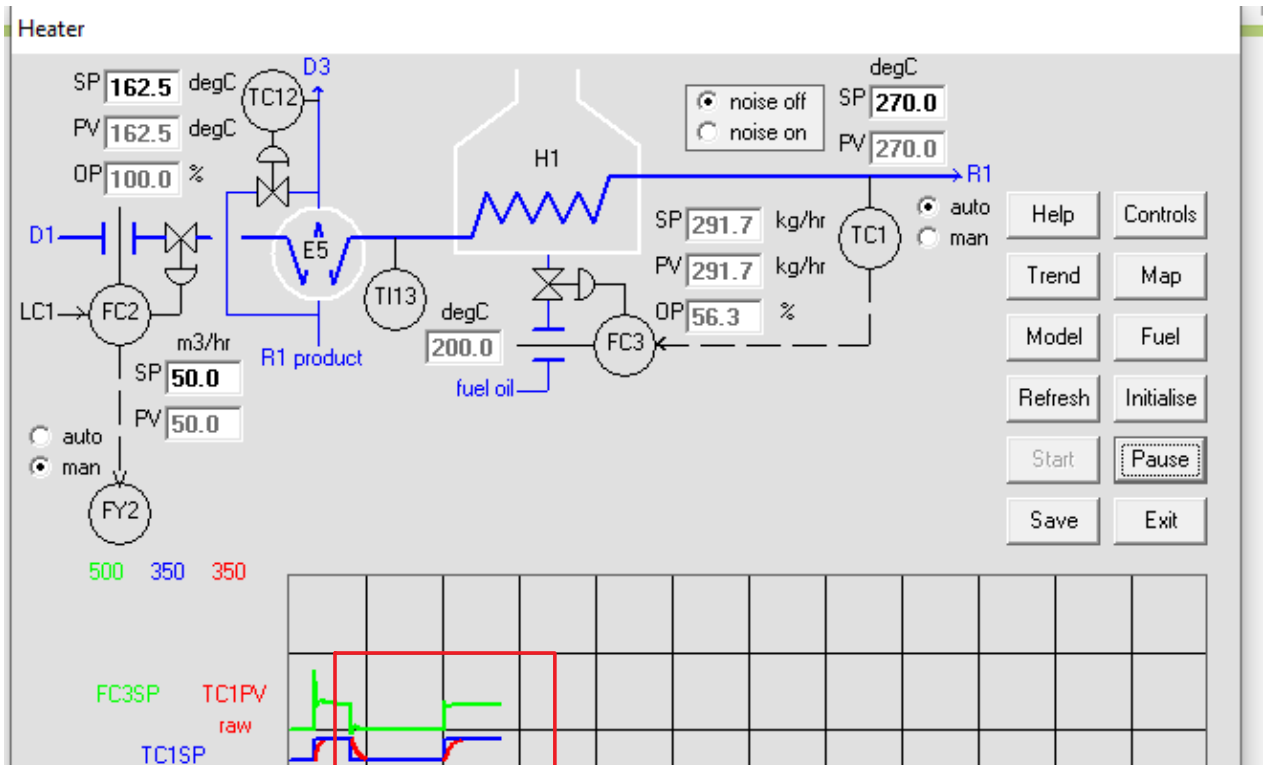
Prediction

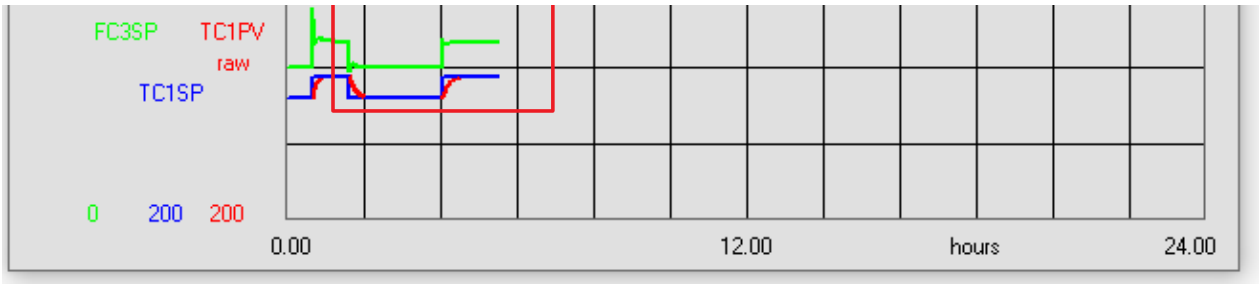
Advanced PID Tuning

Monday, September 12, 2022 9:35 AM



1) Tukar Ti from 1 to 10.Then buat setpoint change. PV looks ok, but MV overshoot quite high
2) Reduce Kc from 6 to 4. To reduce the overshoot

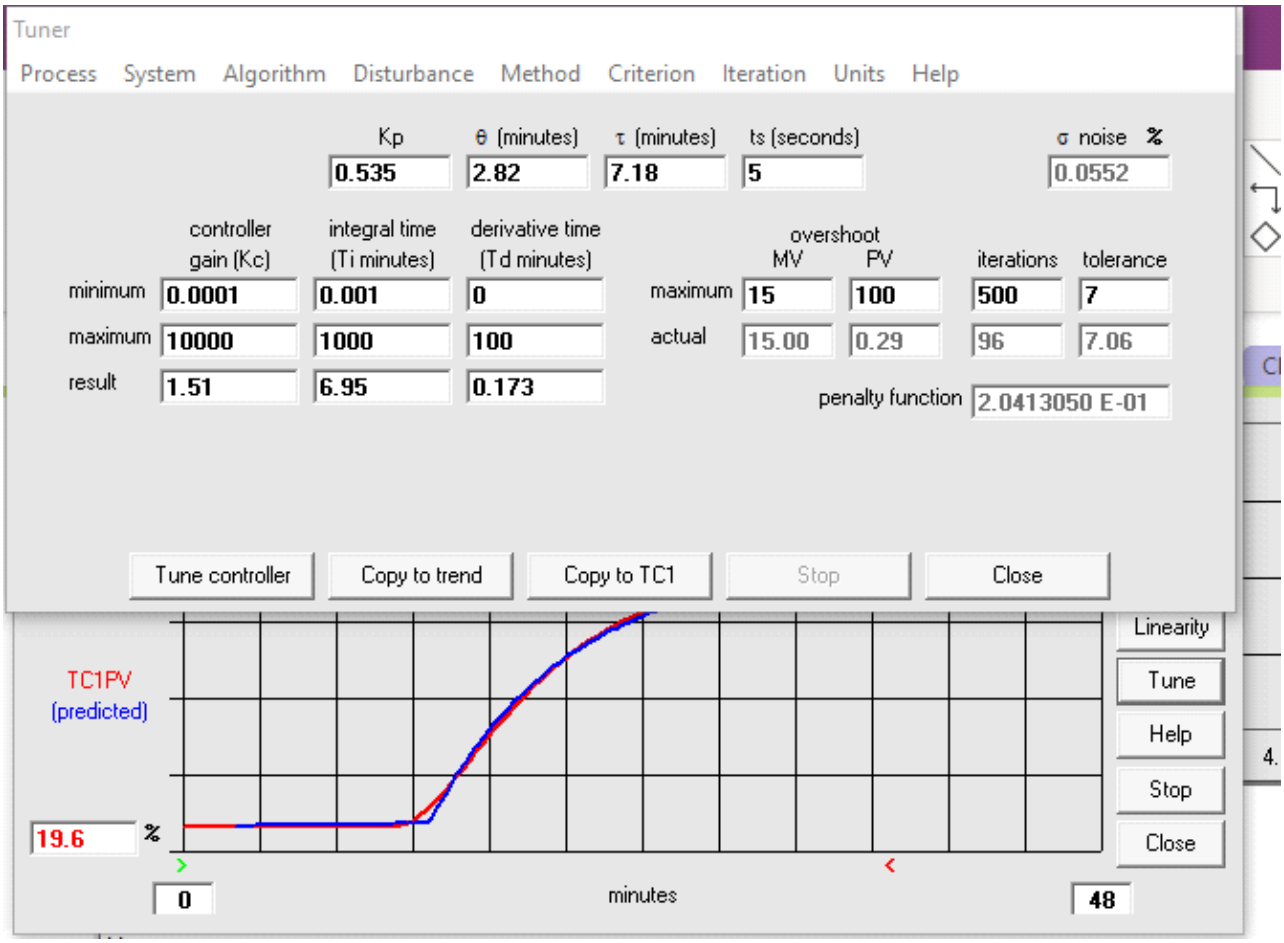


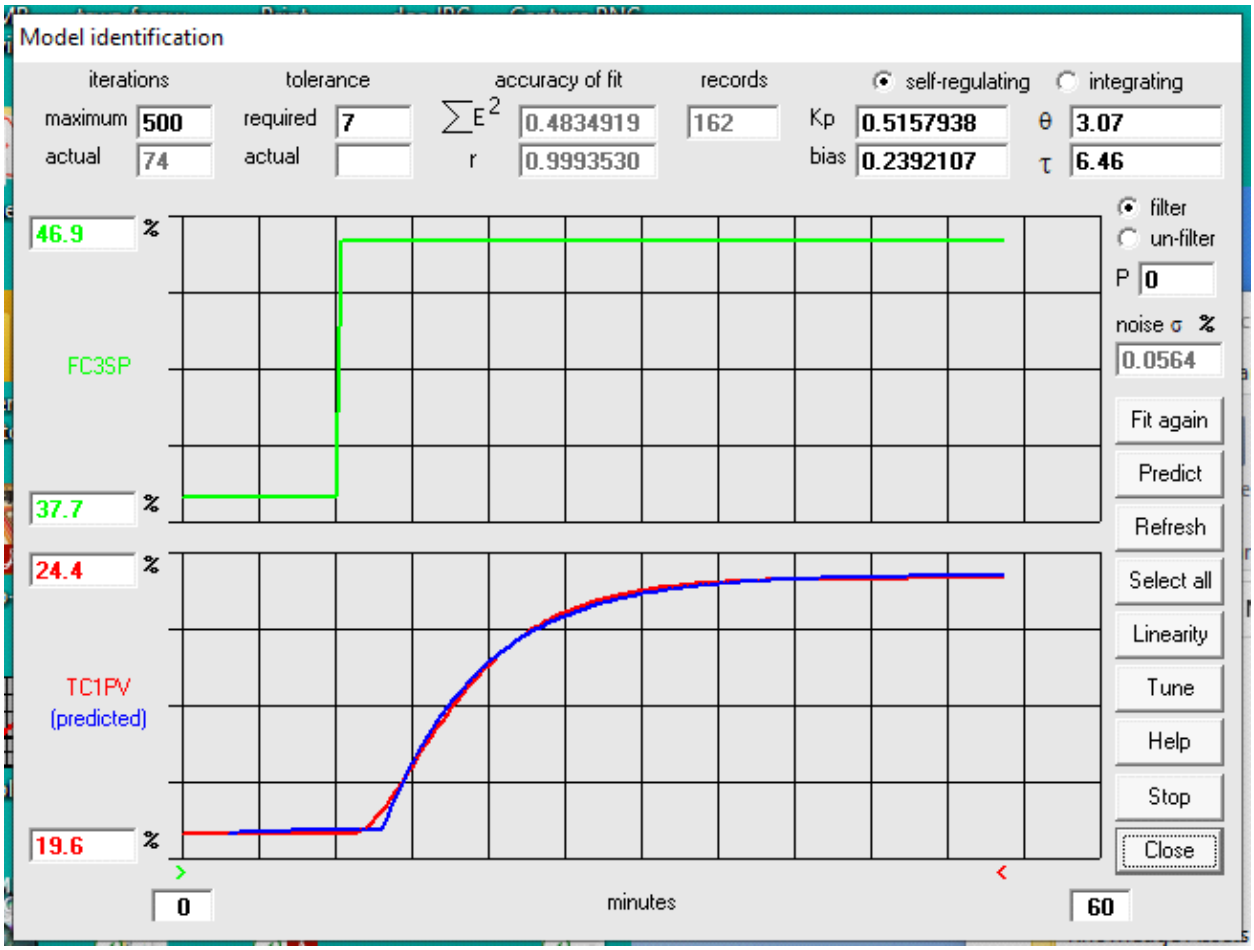


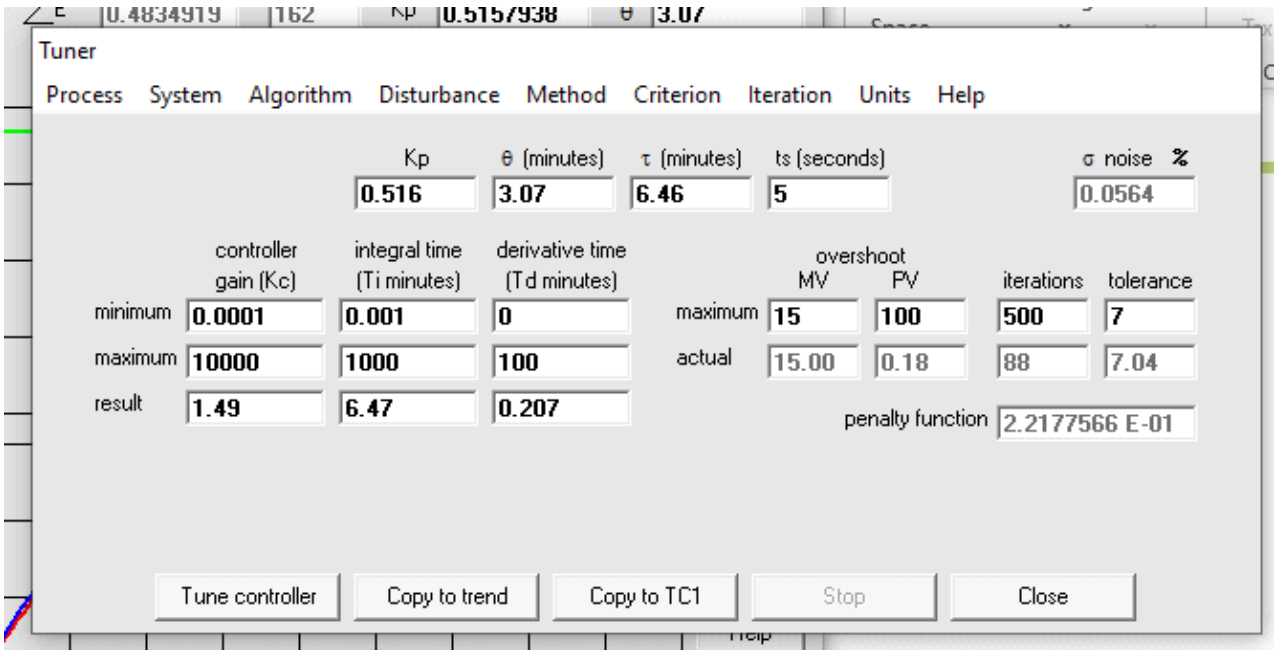
3) Change Kc from 4 to 2. Overshoot is no more now.

Tuning exercise (Open Loop)

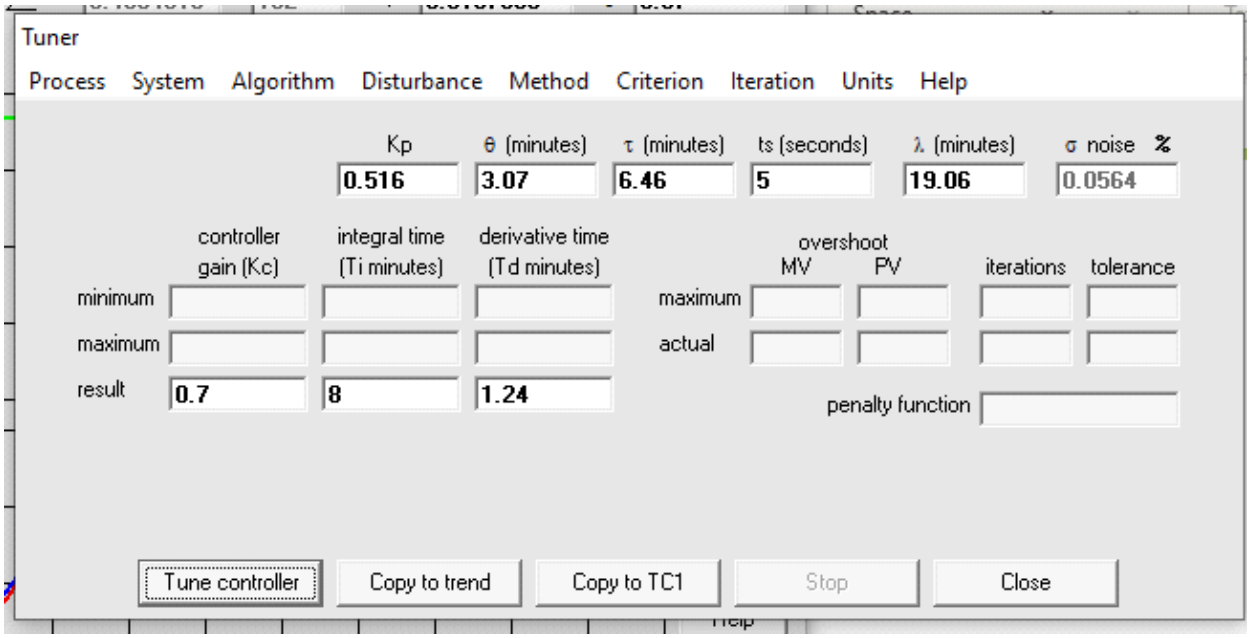
White House method




Model identification
iterations
maximum 500
actual 74
tolerance
required 7
actual
accuracy of fit
∑E2 0.4834919
r 0.9993530
records
162
self-regulating
integrating
Kp 0.5157938
bias 0.2392107
θ 3.07
τ 6.46
46.9 %
FC3SP
37.7 %
24.4 %
TC1PV
(predicted)
19.6 %
0
minutes
60
filter
un-filter
P 0
noise σ %
0.0564
Fit again
Predict
Refresh
Select all
Linearity
Tune
Help
Stop
Close

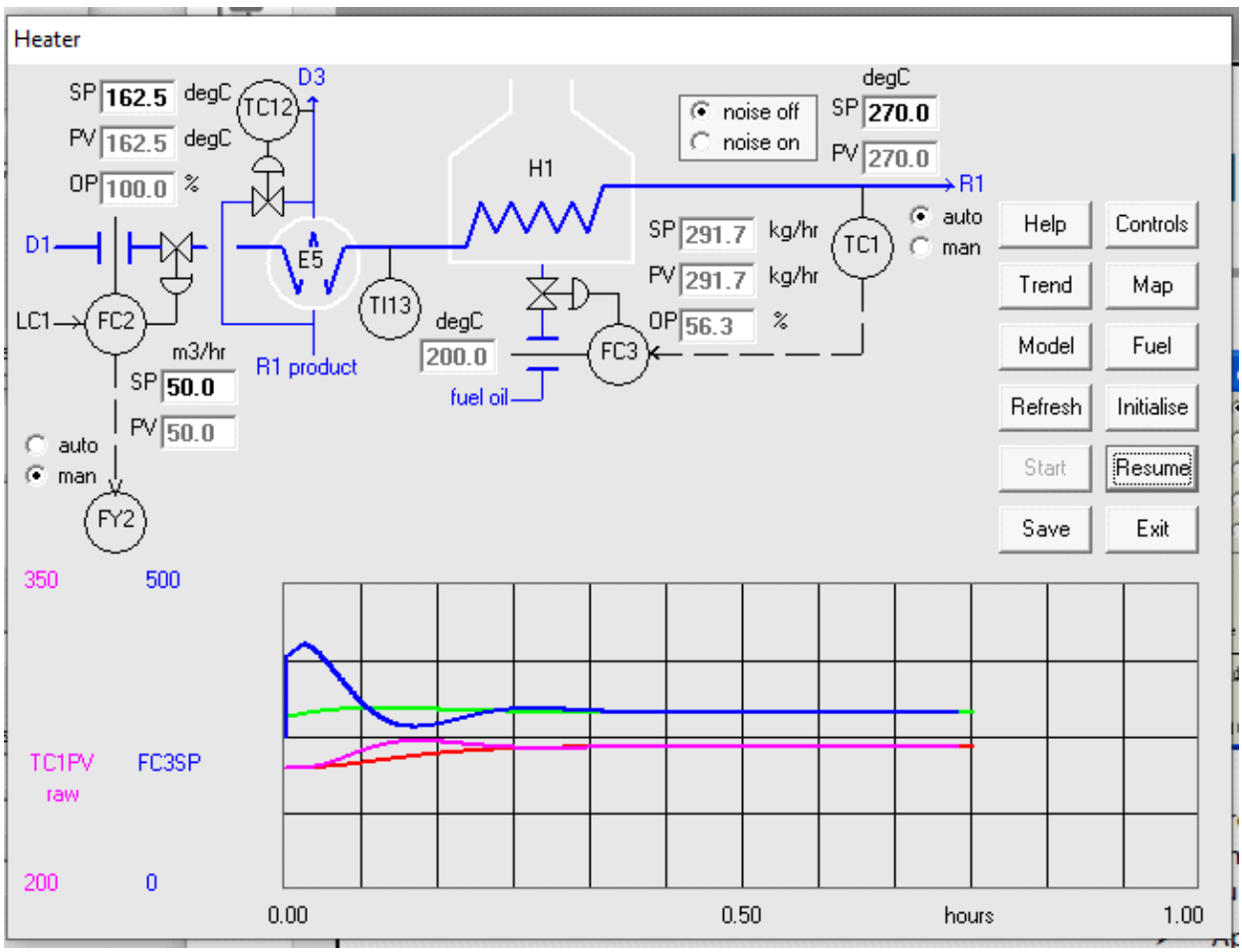

Tuner
Process System Algorithm Disturbance Method Criterion Iteration Units Help
Kp 0.516
θ (minutes) 3.07
τ (minutes) 6.46
ts (seconds) 5
σ noise % 0.0564
controller gain (Kc)
integral time (Ti minutes)
derivative time (Td minutes)
minimum 0.0001 0.001 0
maximum 10000 1000 100
result 1.49 6.47 0.207
overshoot
MV PV
iterations tolerance
maximum 15 100 500 7
actual 15.00 0.18 88 7.04
penalty function 2.2177566 E-01
Tune controller
Copy to trend
Copy to TC1
Stop
Close

White House

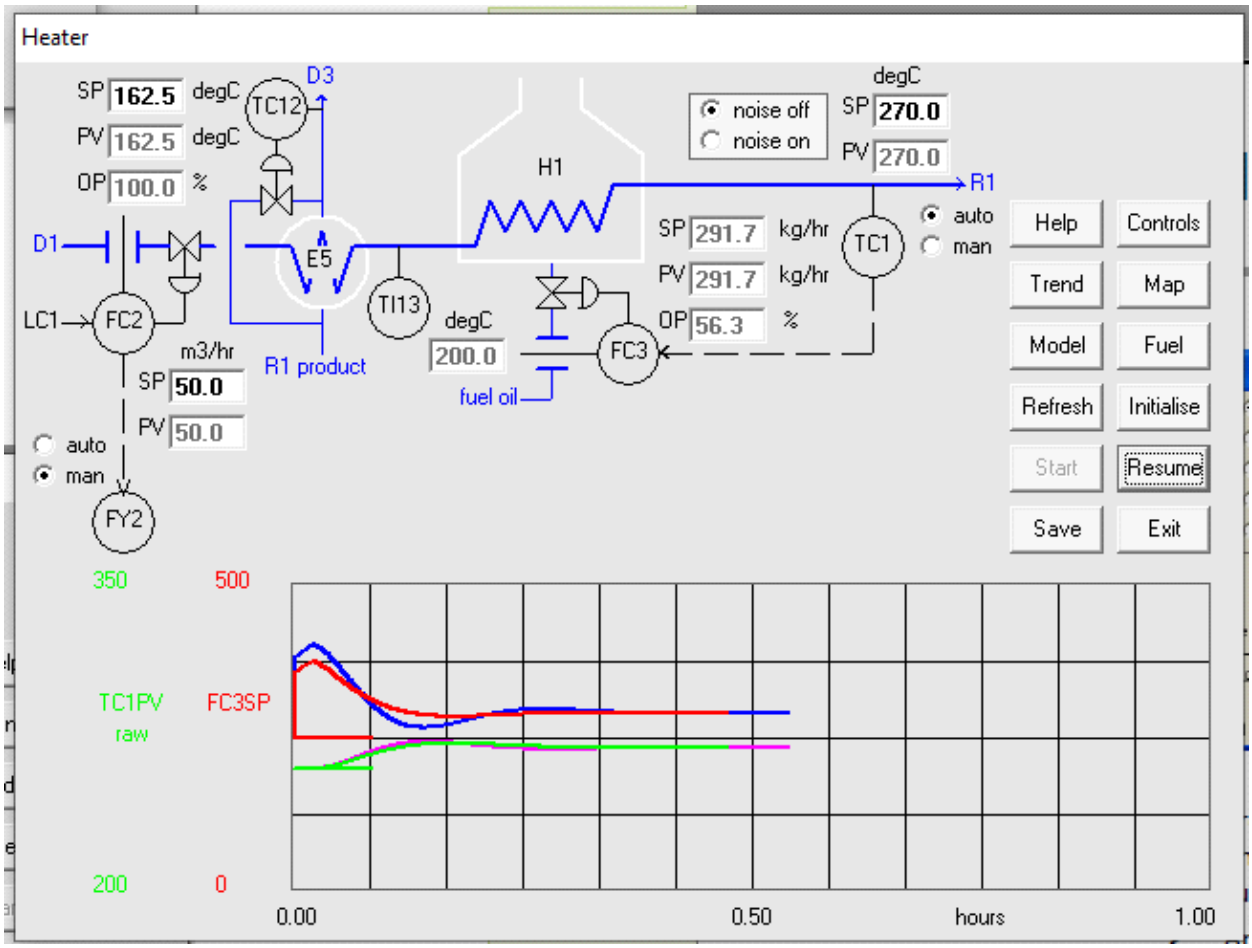


IMC Lambda

Whitehous	1.49	6.47	0.207
IMC	0.7	8	1.24
ZN	4.89	6.14	1.54
CC	5.99	6.47	1.05



Comparison between Whitehouse tuning (MV green+red) vs Cohen Coon (MV Blue+pink)



Compariso between ZN (MV red +green) vs CC (MV blue + pink). PV trend is about the same, but Cohen Coon is a bit aggressive on the MV.

Equation of Lambda

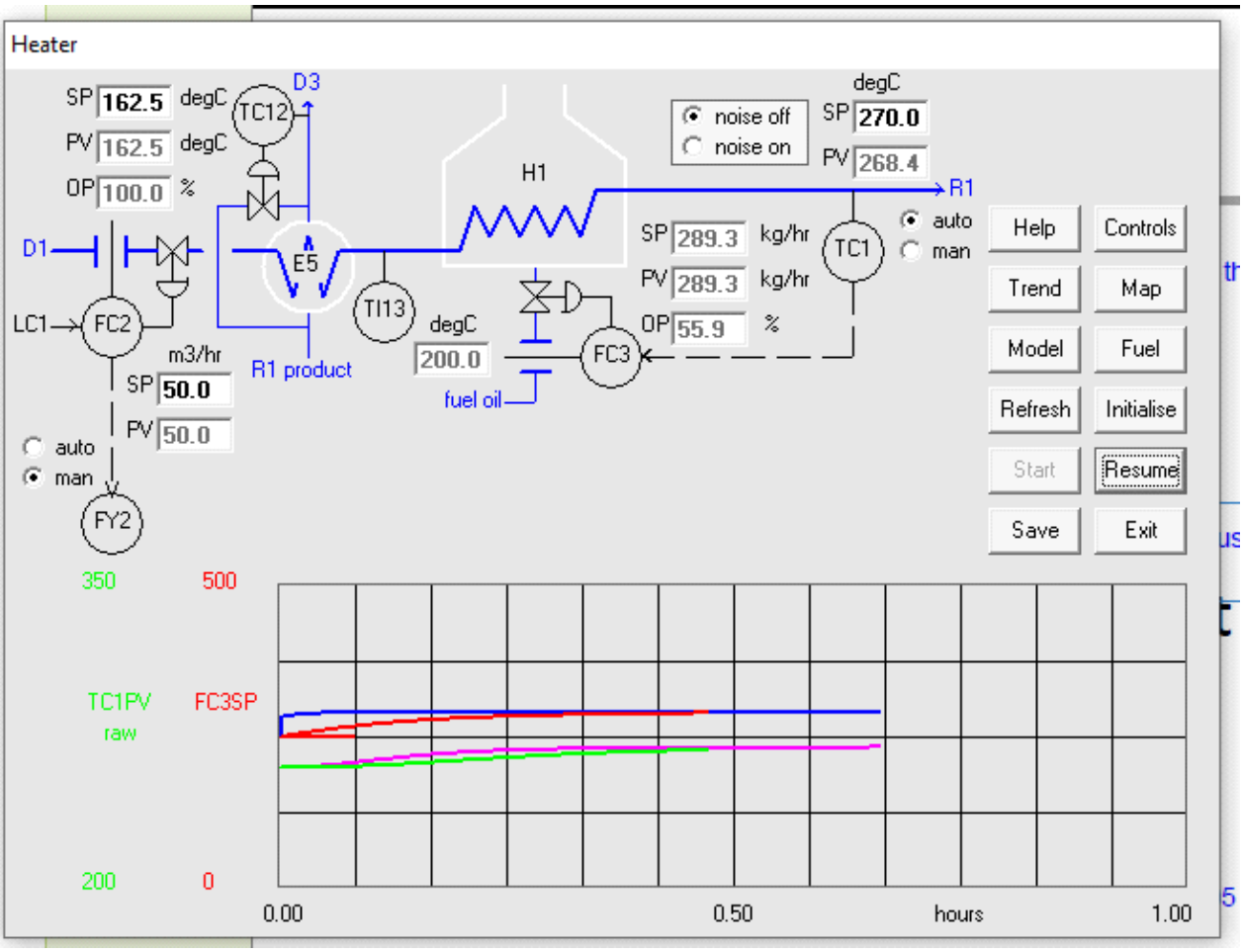
aggressiveness of the controller tuning

- Whitehouse Consulting recommends that

$$\lambda = 0.31\theta + 0.88\tau$$

for 15% MV overshoot.

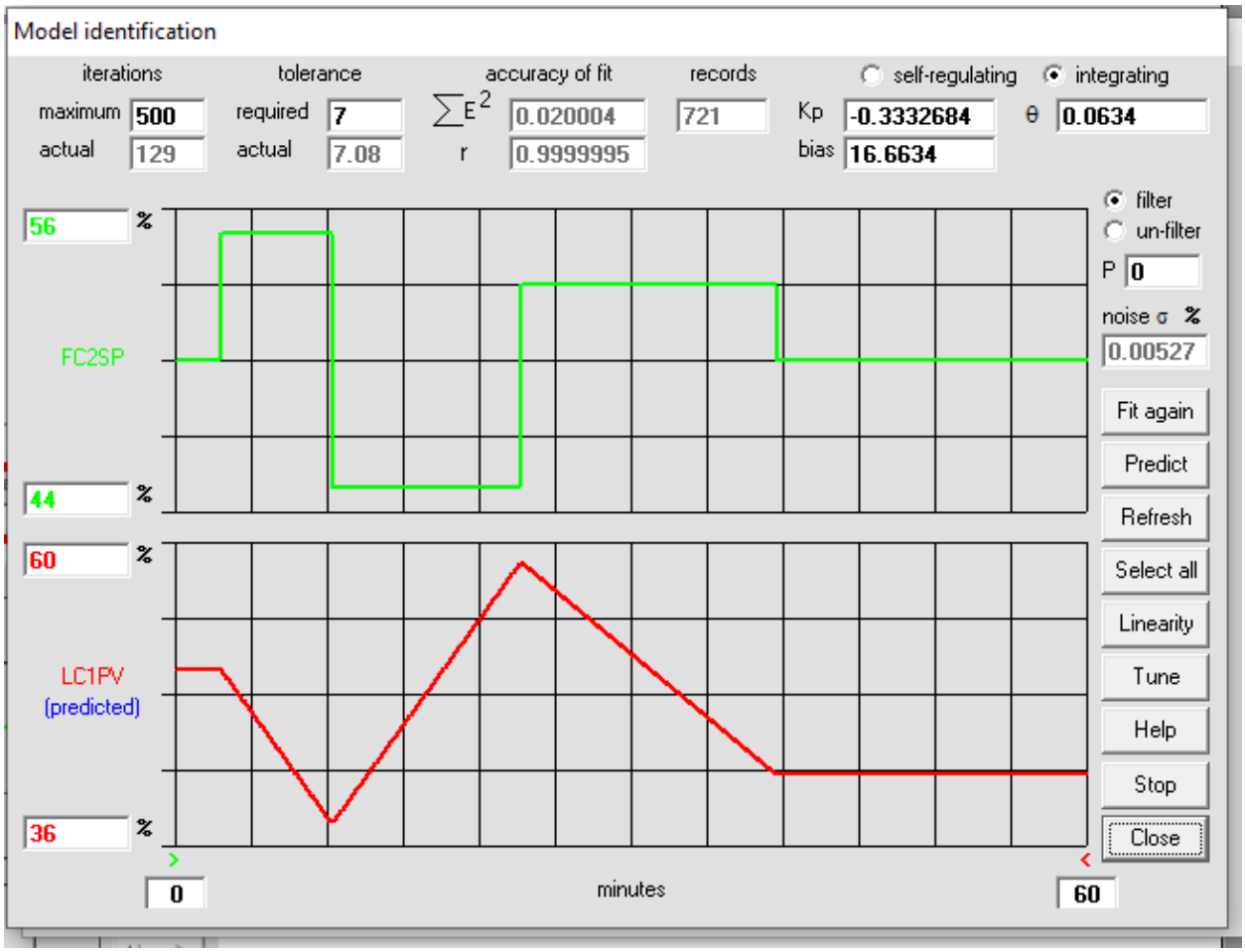
Ziegler Nichols, IMC basis is on Error. Hanya Whitehouse ada.Cuma whitehouse no equation.

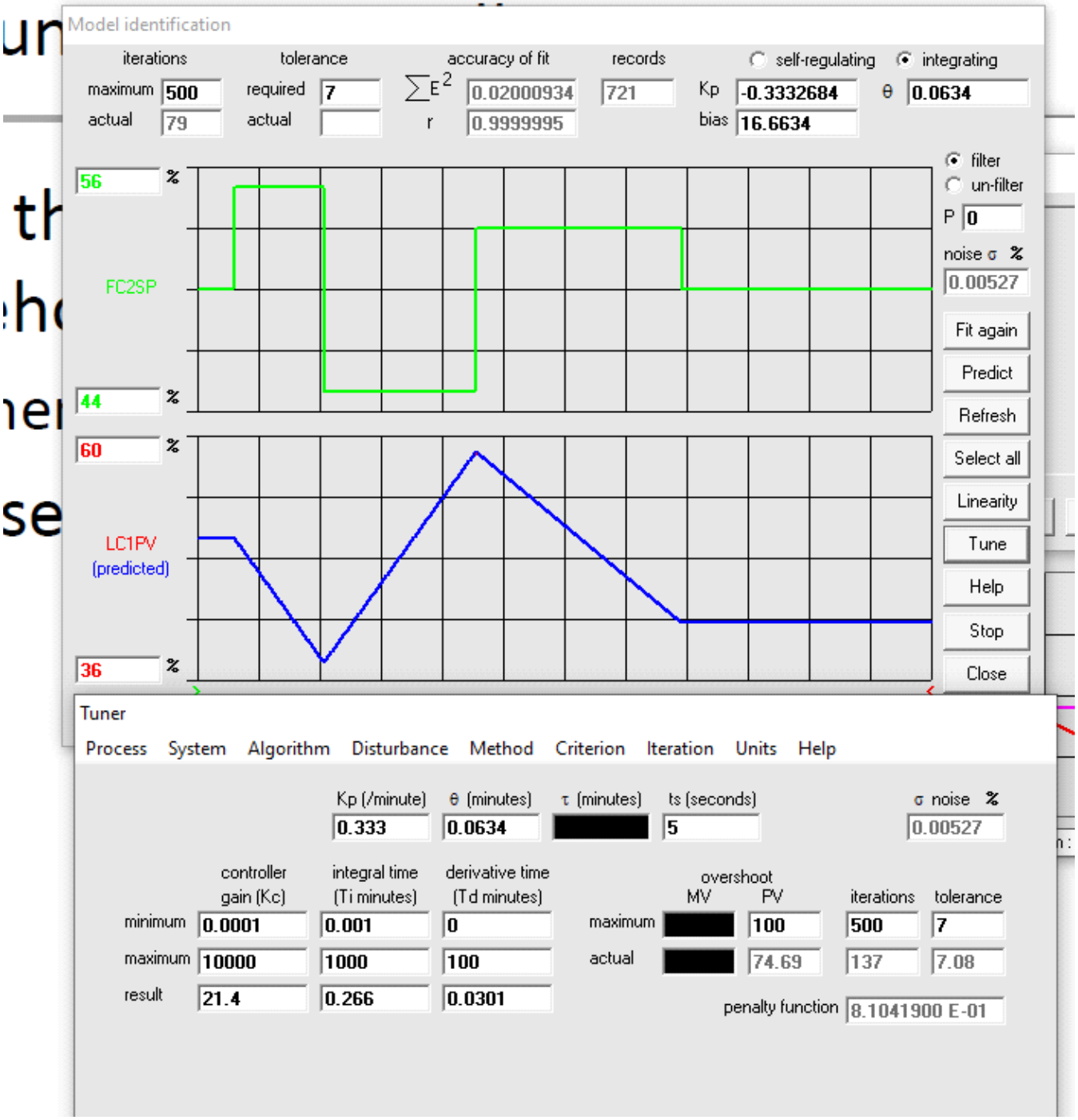


Comparison between P on E and Pon PV(red+ green). No proportional kick.
It is almost the same with PonE ,after we times the gain 3x.

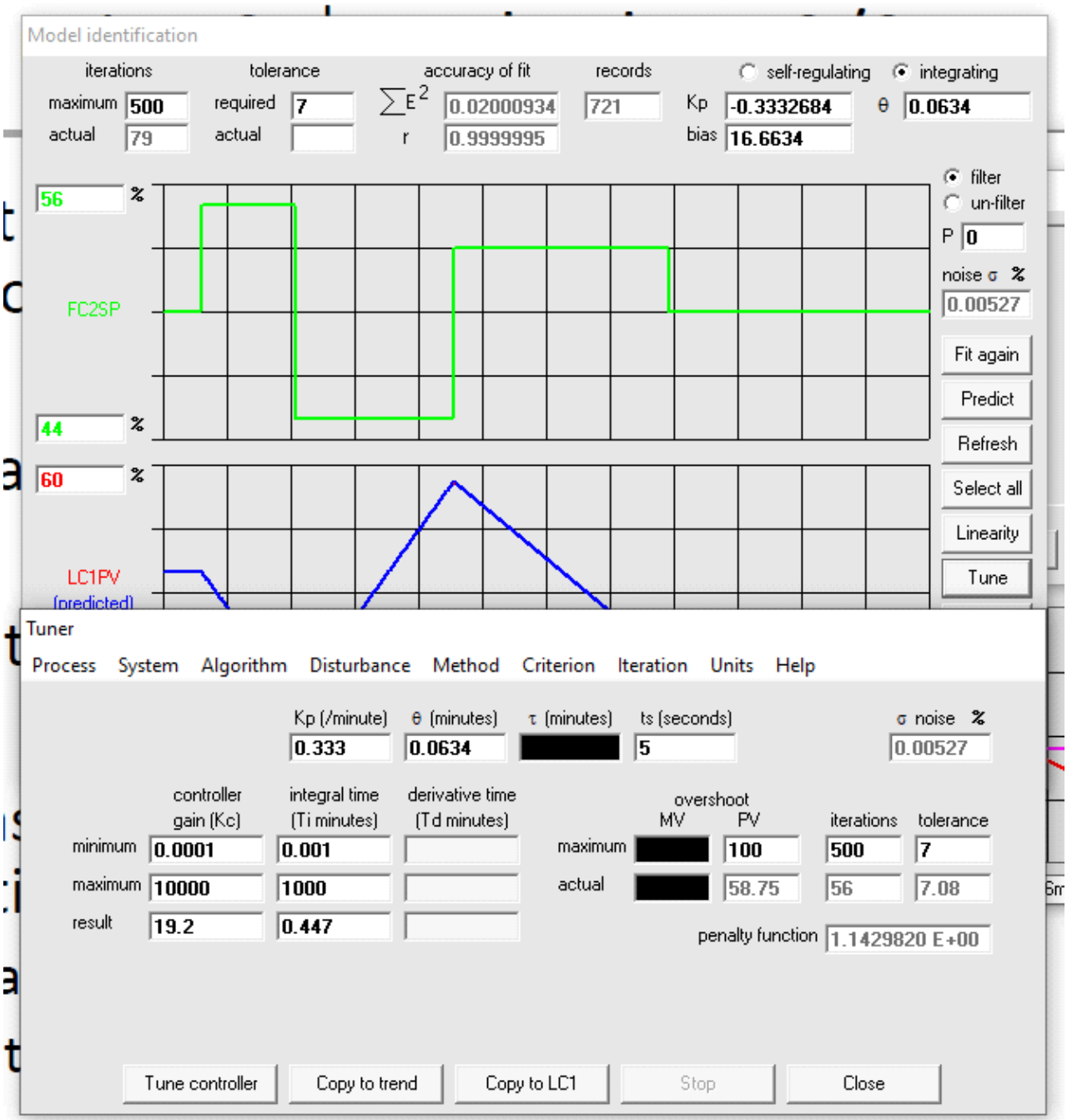
Level Tuning

Identifying model

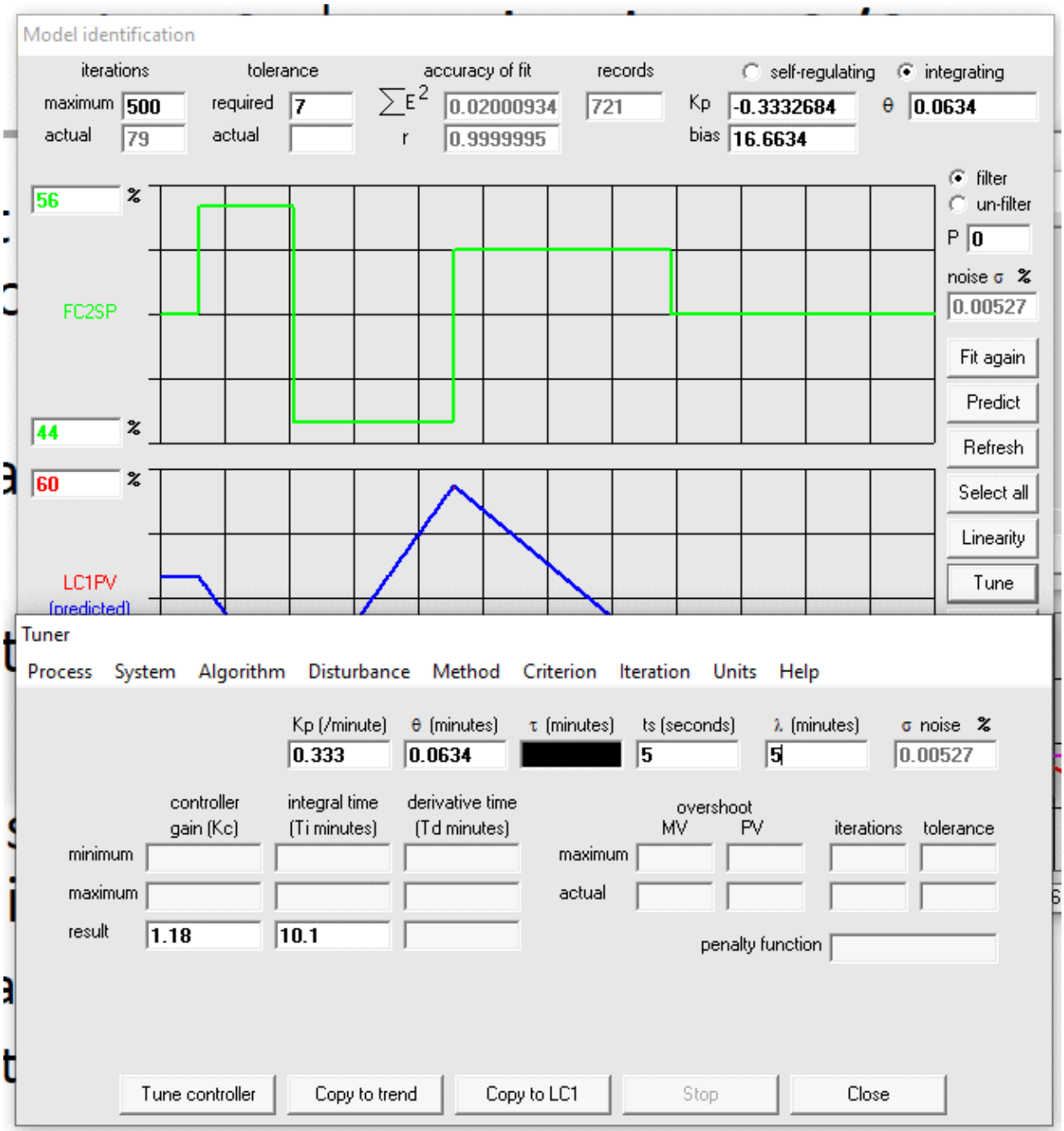

Model identification
iterations
maximum 500
actual 129
tolerance
required 7
actual 7.08
accuracy of fit
∑E2 0.020004
r 0.9999995
records
721
self-regulating
integrating
Kp -0.3332684
θ 0.0634
bias 16.6634
56 %
FC2SP
44 %
60 %
LC1PV
(predicted)
36 %
0
minutes
60
filter
un-filter
P 0
noise σ %
0.00527
Fit again
Predict
Refresh
Select all
Linearity
Tune
Help
Stop
Close



Whitehouse method by using toolkit (PID)



Whitehouse method (PI controller)


Model identification
iterations
maximum 500
actual 79
tolerance
required 7
actual
accuracy of fit
∑E2 0.02000934
r 0.9999995
records
721
self-regulating
integrating
Kp -0.3332684
bias 16.6634
θ 0.0634
56 %
FC2SP
44 %
60 %
LC1PV
(predicted)
filter
un-filter
P 0
noise σ %
0.00527
Fit again
Predict
Refresh
Select all
Linearity
Tune
Tuner
Process System Algorithm Disturbance Method Criterion Iteration Units Help
Kp (/minute) 0.333
θ (minutes) 0.0634
τ (minutes)
ts (seconds) 5
λ (minutes) 5
σ noise % 0.00527
controller gain (Kc)
integral time (Ti minutes)
derivative time (Td minutes)
minimum
maximum
result 1.18 10.1
overshoot
MV PV
iterations
tolerance
maximum
actual
penalty function
Tune controller
Copy to trend
Copy to LC1
Stop
Close

IMC Lambda

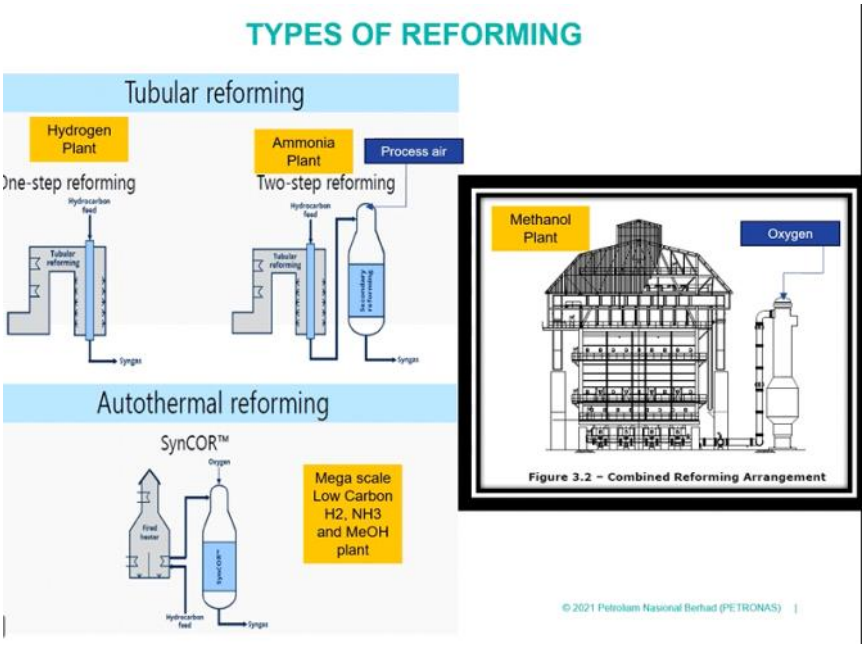
Ammonia Technology SMR

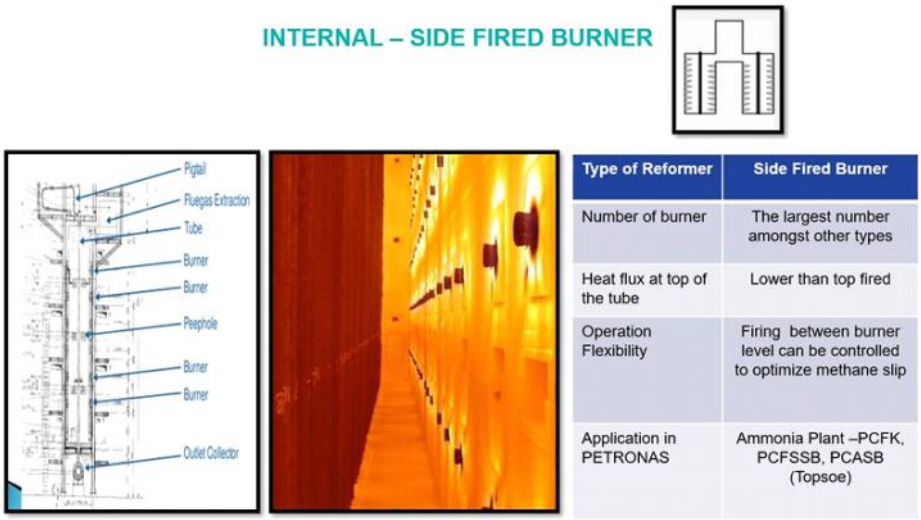
Wednesday, March 27, 2024 10:33 AM

Training of Ammonia
SMR
By TP Dian Helena

Lurgi is bought over by Air Liquide

SynCOR - Mega sclare Low carbon





Type of Reformer	Side Fired Burner
Number of burner	The largest number amongst other types
Heat flux at top of the tube	Lower than top fired
Operation Flexibility	Firing between burner level can be controlled to optimize methane slip
Application in PETRONAS	Ammonia Plant –PCFK, PCFSSB, PCASB (Topsoe)

Topsoe,biasa side firing (PFK,Samur)

Terrace Wall (Melaka)
Top Fired (PML) -13m

[Open]

Understanding Steam Reforming via Le Chatelier's Principle

Reforming:
$CH_4 + H_2O \leftrightarrow CO + 3H_2$ (endo)

Increase in P → will shift the reaction to the left

Increase in T → will shift the reaction to the right

Increase in S/C → will shift the reaction to the right

Shift:
$CO + H_2O \leftrightarrow CO_2 + H_2$ (exo)

Increase in P → has no effect to the reaction

Increase in T → will shift the reaction to the left

Increase in S/C → will shift the reaction to the right

S/C for ammonia plant lagi tinggi 2.4 --3
S/C for methanol lagi less 1.6 - 1.8 - focus on CO.

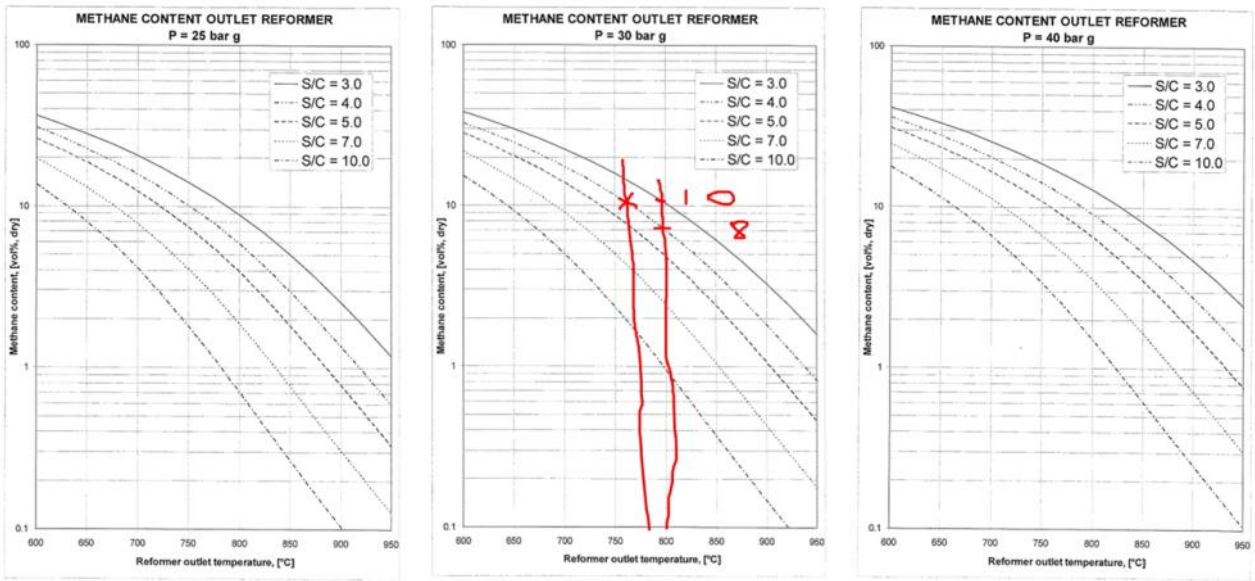
-H2 utk hydrogenation xleh too high. dia akan efek water gas shift reaction..akan reverse ke CO lak..H2 at product side
- NG Feed cannot too low.nanti dekat flue gas side(exchanger di convection), akan ada condensation ,dan cause corrosion
- prereform -reform.heavy hydrocarbon.adiabatic-temp drop..ada takde,depend on capacity(reduce load dekat SMR), atau component.

2.9-30 -S/C Ratio - kalau too low,partial pressure of CO and H2 akan naik..akan damage reduced the catalyst

Methanol should be lower. 2.8

Pressure drop - akan increase exponentially kalau ada issue. To detect any issue with catalyst
TMT - berbeza ikut plant

Economics Direction for Optimization of Steam Reformer



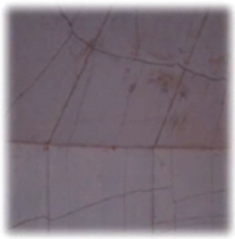
Methane slippage for primary reformer - limited to reformer constraint. If ada margin, boleh je further reduce
Jika high TMT, dia akan reduce tube lifespan significantly. Worst case ada tube rupture

Critical Operating Parameter
Autothermal Reforming Section

Combustion Zone

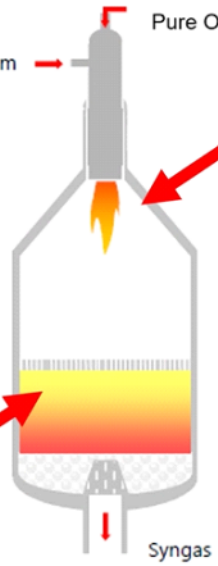
$H_2 + O_2 \leftrightarrow H_2O$, $\Delta H_{rxn}<0$

$CH_4 + 3/2O_2 \rightarrow CO + 2H_2O$, $\Delta H_{rxn}<0$



Refractory

Outlet system



Burner

Tiles & inerts

Catalytic Bed

Reforming of Methane

$CH_4 + H_2O \leftrightarrow CO + 3H_2$, $\Delta H_{rxn}>0$

Water Gas Shift

$CO + H_2O \leftrightarrow CO2 + H_2$, $\Delta H_{rxn}<0$

PETRONAS

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ATR ni incomplete combustion. Tpai takde issue ,sebab CO memang required to produce methanol

Operational Issues at Reformer
Carbon Formation

Methane Cracking

$$CH_4 \leftrightarrow C + 2H_2 \text{ , } \Delta H_{rxn}>0$$

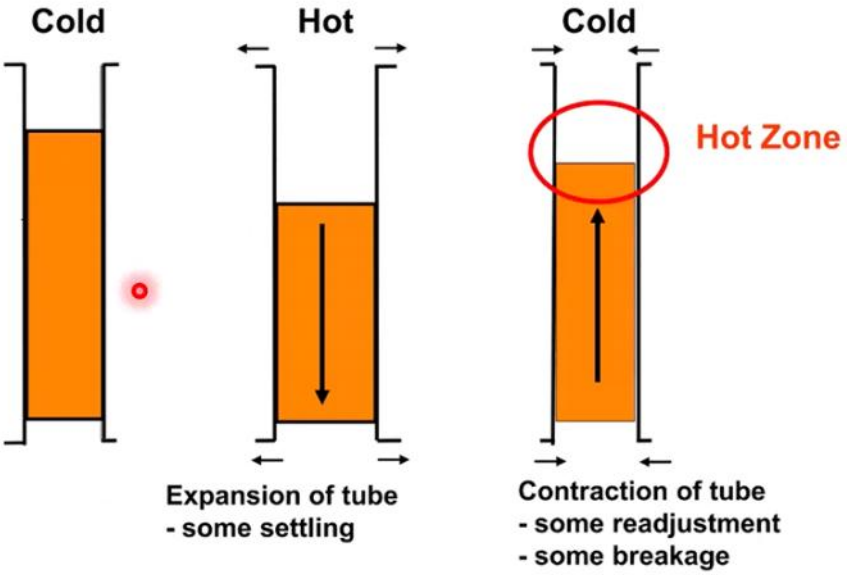
CO Hydrogenation

$$CO + H_2 \leftrightarrow C + H_2O \text{ , } \Delta H_{rxn}<0$$

CO Disproportionation/ Boudouard Reaction

$$2CO \leftrightarrow C + CO_2 \text{ , } \Delta H_{rxn}<0$$

Operational Issues at Reformer
High DP at Reformer Tubes



Bila trip/shutdown,tube jadi sejuk ,contract dan catalyst akan oecah..tu yang naik DP tu…biasa plant selalu trip,akan cepat naik DP ni..

Breakage pun tak berlaku pada semua tube. Jadi, akan ada prefential flow mengikut tube yang less DP

Jika ada issue, kita boleh nampak macam TMT issue ke,sebab less flow.nanti kena verify buat dp test to confirm which tube https://petronas-my.sharepoint.com/personal/aminuddin_ishak_petronas_com/Documents/M%20Aminuddin%20@%20PETRONAS%20-%20Linked%20Files/AMMONIA%20PLANT%20-%20FRONT%20END%20TRAINING%2027%20MARCH%20%5bAutosaved%5d.pptx

RGA Training

Wednesday, April 17, 2024 10:47 AM

you will be able to get a steady-state gain matrix. Let us assume a

$$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

$$A^{-1} = \frac{1}{ad-bc}\begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

matrix.

be visualized. Hold the main diagonal of the matrix, which is the di
on either side of the diagonals.

$$A^{-1} = \frac{1}{ad-bc}\begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

$$(A^{-1})^T = \frac{1}{ad-bc}\begin{bmatrix} d & -c \\ -b & a \end{bmatrix}$$

How was RGA Used for Pairing?

These are the rules for controller pairing using the RGA.

1) Numbers closest to 1 indicates less interaction. This makes it highly sought as pairing.
2) Numbers around 0.5 indicate interaction.
3) Numbers that are very large indicate interaction.
4) Numbers that are negative indicate that the controller sign may have to be different.
5) **Very large values of the RGA indicate that the system can be quite sensitive to changes in the parameter values.**

For detecting ill-conditioned systems, item 5) of RGA is utilized. RGA is not used for controller pairing anymore.

This is the reason why it is unnecessary for us to get every element of the matrix. Getting the single value (which we call the RGA number) is sufficient information to reflect on whether the system is ill-conditioned. Detecting this ill condition uses a different parameter and not the controller parameters described above in items 1) to 3).

If $\beta_{11} < 5$, control is reasonable, and the process gains can be implemented if the simulation shows reasonable results.
If $5 < \beta_{11} < 10$, further investigation is necessary.
If $\beta_{11} > 10$, process gains must be altered!

Compare gain ratios either between columns or between rows according to the parameters below.

Condition	Risk of Ill-Conditioned System	Status of Collinearity
G_{11}/G_{12} "almost equal to" G_{21}/G_{22}	High risk	Almost collinear
G_{11}/G_{12} "equal to" G_{21}/G_{22}	No risk	Exactly collinear
G_{11}/G_{12} "not equal to" G_{21}/G_{22}	Low risk	Not collinear

ng the formula below:

$$\beta_{11} = \frac{1}{1 - \frac{G_{12}G_{21}}{G_{11}G_{22}}}$$

Case 1) Top quality reduces by 0.1

	Reflux Flow	Reboiler Flow	dCV
Top Quality	-1	1	-0.1
Bottom Quality	1.18	-1.2	0
Inverse	-60	-50	
	-59	-50	
Reflux dMV	6		
Reboiler dMV	5.9		

Matrix ultiplication = [2X2]. [X,Y] = 0.1,0.1
= X,Y = 0.1,0.1 *[2X2]-1(INVERSE)

Conclusion to Resolutions of Ill Condition System
(Answers to the purple box questions)

Making it non collinear:

- 2 MVs will be controlling 2 CVs at the same time, however tight control may not be possible due to huge interaction between the CVs.

Making it exactly collinear:

- 1 MV will try to control 2 CVs, It is not possible to control both at the same time without ranking them accordingly. However, there will be an additional degree of freedom available for the 2nd MV. The 2nd MV can now be used to control a 3rd CV.

Which is better?
You would need to simulate both condition to decided which approach is better depending on your controller design and constraints.

:::Kalau guna IV, kita jadikan exactly colinear. IV kena effect lagi cepat dari the CV
:::IV to reduce deadtime

To Show that IV Solution is an Exactly Collinear Solution

	Top Temp 37TI02.PV	LP Vent 35PICA03.MVC	GR
Reflux 37FIC01	-3.75636	56.537582	-0.066440054
Bottom Steam 37FIC02	0.001448	-0.039482	-0.03667494
GR	-2594.171271	-1431.983739	

$$\beta_{11} = \frac{1}{1 - \frac{(0.001448)(56.537582)}{(-3.75636)(-0.039482)}}$$

$$\beta_{11} = 2.232$$

Note: This is not ill-conditioned; (RGA < 5)!

IV Solution

	Top Temp 37TI02.PV	LP Vent 35PICA03.MVC
Reflux 37FIC01	-3.75636 (G1)	-10.22 (G3)
Bottom Steam 37FIC02	0.001448 (G2)	

MV-IV	
G1	-3.75636
G2	0.001448
G1/G2	-2593.92

MV-CV	
G1*G3	38.386
G2*G3	0.014799
G1*G3/G2*G3	-2593.92

Exactly collinear!

Relative Gain Array

- RGA represents the ratio of the open loop to closed loop performance of the system for each input-output pair.
  - RGA = 1 → Ideal performance, complete correlation
  - RGA < 5 → Good correlation between the I/O pair
  - RGA < 8 → Reasonable/acceptable correlation
  - RGA > 8 → Possible inconsistent gains, collinearity issue
  - RGA > 20 → Nearly collinear systems, review and fix
- Collinearity Analysis tool calculates the RGA for all 2X2 sub-matrices in the model and highlights possible issues.
- **Always perform Collinearity analysis on the Master model before online deployment!**

Wednesday, January 12, 2022 8:49 AM

Planning 2022

- Update procedure dengan vendor specific.. AV required by vendor, masa bila nak update.

Yokogawa Meeting

Wednesday, January 19, 2022 2:04 PM

Ye Myint
Dr Wang
Mizuta
Poo Hwei Ching
Normaya
Fadillah

Agenda:

The 3 main items for discussion are as follows

1. Approach on Yokogawa APC Enterprise Agreement Vs. DCS GFA with Group Data and Group Procurement - to discuss with Mastura and Hasni.
2. Official Link for PACE RT/DT software download for PCMSB and other opus (in the interim while finalizing item 1)-To send email request the link,to show urgency.
3. Resolution on MLNG PACE-PIMS connectivity – PACE server down due to read and write error when PIMS server is down.

Others:

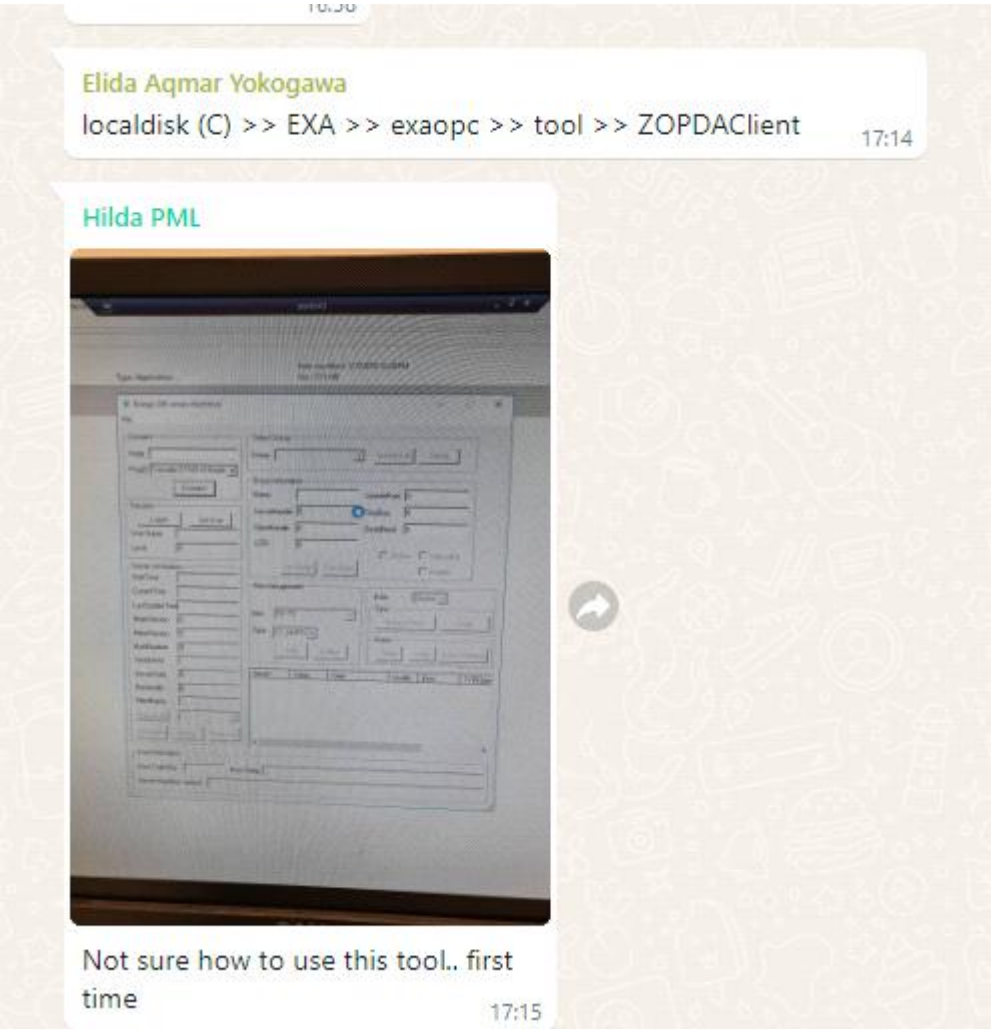
1. Follow up on RTOT deployment for APC sub system : MLNG/PTTSB/PCMSB - Pele to update and follow up with RTOT team. AV qoutation. Amin to work with Giwok. (37:00)
2. Update on PACE migration/revamp work for PETRONAS OPUs : PGB, MTBE, PCASB, PCFKSB - Pele to summarize the status of revamp.
3. Update on Yokogawa PACE development Server - at level 4.

Salient Points:

1. Global etc.EA will take effect immediately. Mastura will come back for the difference between DCS GFA and Enterprise Agreement. EA is more towards solution and software.
2. Link will be sent from Yokogawa (Dr Wang), as official, legitimate software to be used.
3. Helpdesk from Yokogawa. Official link to request support and software. Mastura to find helpdesk link

How to write via OPC

Thursday, November 3, 2022 5:16 PM



Yokogawa Meeting

Thursday, December 15, 2022 10:14 AM

Bring to management meeting
3rd week January -16-20th January -Hasni available

1) No clear SOW for APC

DBE Meeting

Wednesday, February 15, 2023 2:15 PM

Governance
Development Server
Production Server

SOW/Development Server/Interdomain testing -task with Yokogawa

DBE weakness:
APC Engineer tak cukup, PCG can share TP,pool kan ikut Process, APC Related etc. Can share TP remotely
Save time,money and cost

RDP license - how to relate with A- account
Request server = specific server
Temporarily =according dalam beberapa tempoh

Audience APC engineer

SAMUR,PCASB,PML2 to be expanded.But not only APC,maybe on BLC work, Advanced control etc.

Production servers:

One slide:

Citrix -stringent approval, can do anything to your servers,restart server,timebased(few months),citrix under I&C

Remote,kalau web server,limited.private lane.exclusively for APC, 24hrs /7,operational

VMs/servers via VPN.

No	Server Name	IP	Role
1	vcendpaceapc1	10.14.67.11	PACE APC
2	vcendaspenapc1	10.14.67.12	ASPEN APC
3	vcendopcap1	10.14.67.13	OPC
4	vcendopcap2	10.14.67.14	OPC
5	vcendfcsap1	10.14.67.15	FCS
6	vcendfcsap2	10.14.67.16	FCS
7	vcendfcsap3	10.14.67.17	FCS
8	vcendfcsap4	10.14.67.18	FCS
9	vcenddcsap1	10.14.67.19	DCS
10	vcenddcsap2	10.14.67.20	DCS

No	IP	Hostname	Function under BRA	Function
1	10.14.67.11	vcendpaceapc1	Yokogawa APC	PACE APC
2	10.14.67.12	vcendaspenapc1	ASPEN DMC3	ASPEN APC
3	10.14.67.13	vcendopcap1	Yokogawa ExaOPC	OPC
4	10.14.67.14	vcendopcap2	Yokogawa ExaOPC	OPC
5	10.14.67.15	vcendfcsap1	Yokogawa DCS	FCS
6	10.14.67.16	vcendfcsap2	Yokogawa DCS	FCS

7	10.14.67.17	vcendfcsap3	Yokogawa DCS	FCS
8	10.14.67.18	vcendfcsap4	Yokogawa DCS	FCS
9	10.14.67.19	vcenddcsap1	Yokogawa DCCS	DCS
10	10.14.67.20	vcenddcsap2	Yokogawa DCS	DCS

Meeting with Bobby

Thursday, April 6, 2023 2:17 PM

Architectural security -

Level 4 -

CENTUM CI - use open language, not Centum protocol.

Tunneler communicate between to 2machine. Specific for opc communication.

Domain cotnroller,log connector.o

Enpoind monitoring
End point security -- mcafee

Cyber Security Training

Tuesday, April 18, 2023 1:19 PM

OPC - No longer OLE for Process Control. Windows based. Now is Open Platform Communication. Transfer data protocol,and continously.

SFTP - Transfer data ,in batch. Transfer file.

OSI (7 layers) -communication between devices
Purdue Model - Level of Network

VLAN - Reduce cost ,switches, spaces
-Boleh utk IP segmentatio

NETWORK LAYER (3):
IP -Internet Protocol
Router - to route to the faster route.

Port 89 : Web Application

Encryption not at all layer..3.5,between firewalal..or level 4,close to l4,it domain

How to know it is L3.5 - Ada firewall, Jump server

OT space - tiada Intrusion Prevention System-bahaya kalau di OT,takut block signal2, ada Intrusion Detection System (OTAM)

Beli hardware backup, dan backup agent. Anti virus

APC SOW

Monday, May 8, 2023 10:26 AM

To add on OTS

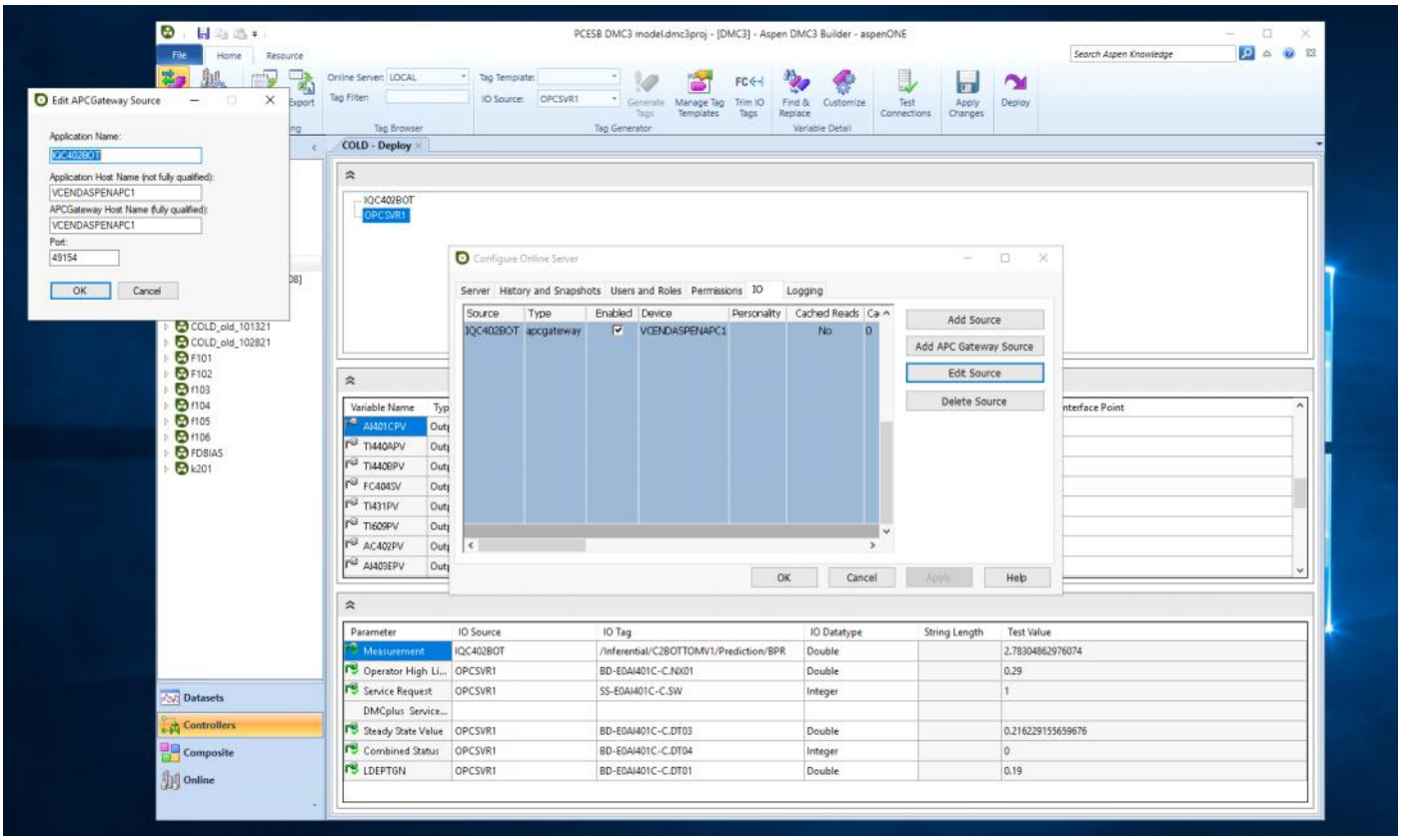
Intro
Prerequisite

ASPEN Setup

Friday, July 14, 2023 9:46 PM

APC Gateway - to connect DMC3 and Aspen IQ

Aspen DMC3 V1...



IO Tag Syntax Examples for Aspen IQ Attributes

IQ Module	APC Gateway Module Syntax	Attribute Examples	IO Syntax
Config	/General/	CNTDWN	/General/CNTDWN
Prediction	/Inferential/<NAME>/Prediction/ /Inferential/<NAME>/Prediction/Model/<VAR>/ /Inferential/<NAME>/Prediction/Calc/<VAR>/	BAZ, BPR INFILTT1 CVARPNTSTS	/Inferential/SSCOMP/Prediction/BPR /Inferential/KEROFREEZE/Prediction/Model/FI-2005/INFILTT1 /Inferential/KEROFREEZE/Prediction/Calc/FI-2005/CVARPNTSTS
Analyzer Update	/Inferential/<NAME>/Analyzer/ /Inferential/<NAME>/Analyzer/Sample/<SMPL>/	NEWANZ PAZUBAZ	/Inferential/SSCOMP/Analyzer/NEWANZ /Inferential/SSCOMP/Analyzer/Sample/Sample0001/PAZUBAZ
Lab Update	/Inferential/<NAME>/Lab/ /Inferential/<NAME>/Lab/Sample/<SMPL>/	NEWLAB PLBULAB	/Inferential/NAPHTHA95/Lab/NEWLAB /Inferential/NAPHTHA95/Lab/Sample/Sample0001/PLBULAB
Data Collection	/Inferential/<NAME>/DataCollection/<VAR>/	DCPNTVAL	/Inferential/SSCOMP/DataCollection/DRAWT/DCPNTVAL
Steady State Detection	/Inferential/<NAME>/SteadyStateDetection/ /Inferential/<NAME>/SteadyStateDetection/<VAR>/	SSTOTAL SSFFRATIO	/Inferential/SSCOMP/SteadyStateDetection/SSTOTAL /Inferential/SSCOMP/SteadyStateDetection/FC101PV/SSFFRATIO

Notes:

<NAME> refers to the IQ application name, as deployed and as hosted by the gateway.

<VAR> refers to the variable name. If the module depends on a variable, the variable name must be pass as an input

<SMPL> indicates the the sample number.

PI Training

Tuesday, January 9, 2024 11:19 AM

PI Collector - sama macam PI server, Cuma no access. Biasa di L3.5. Can historize
PI Interface - cannot historize data - L3.5/L3(dalam DCS)
Pi Server - Accessed by user.

Planning 2023

Monday, January 22, 2024 2:59 PM

ALTUM OPSR 03555

Call for meeting in February. Foxboro ,Pele and GD KOM

PCOGD - Foxboro DCS-Aspen-ada project APC) ON
MLNG-Foxboro -PACE&Exapilot -CAN DO TESTING ,GO INTO SERVER ON
PGB - Foxboro - PACE&Exapilot(santong)-depend exa ada di santong or not
PCEPE-Yokogawa- Exapilot and APC project NO
PCASB- Yokogawa-Exapilot ,PACE- (testing exapilot-apc) ON

OPSR03555

Friday, March 22, 2024 9:26 AM

Meeting 22/3 Server Access and Wayforward meeting

Demo how to access the server

Wayforward
1) Can start work. What is the requirement. Unjoin domain
2) Please sign the NDA to us to get the database

No	Description	Host name	IP address
1	ALTUM Development Servers	vcendpaceapc1	10.14.67.11
2	ALTUM Development Servers	vcendaspenapc1	10.14.67.12
3	ALTUM Development Servers	vcendopcap1	10.14.67.13
4	ALTUM Development Servers	vcendopcap2	10.14.67.14
5	ALTUM Development Servers	vcendfcsap1	10.14.67.15
6	ALTUM Development Servers	vCEN302EXAPILOT1	10.14.67.16
7	ALTUM Development Servers	vCEN302FOXBOPC01	10.14.67.17
8	ALTUM Development Servers	vCEN302FOXBDCS01	10.14.67.18
9	ALTUM Development Servers	vcenddcsap1	10.14.67.19
10	ALTUM Development Servers	vcenddcsap2	10.14.67.20
11	GTS ALTUM	vCENPGTSASPWEB1	10.14.17.97
12	GTS ALTUM	vCENPGTSPCEWEB1	10.14.17.98
13	ALTUM (New CIRF-10154446)	vCEN302ALTEXAY01	10.14.27.162
14	ALTUM (New CIRF-10154446)	vCEN302ALTFOXB01	10.14.27.163

Add on nama asal, OS, VCPU, RAM,DOMAIN

Meeting 22/4 Server Access and Wayforward meeting
Update:

1) Foxboro is able to access the servers
2) Yokogawa able to access the servers by using zscaler

Queries:
1) How to configure exapilot & foxboro application. Perlu unjoin domain kan?
2) How to access servers yang da unjoin domain? - Azhan
3) Boleh verify tak yang servers da updated as per spec required

Summary by Copilot

As per our discussion recently, we will have a project which is OPSR03555: ALTUM Development Server with Foxboro and Exapilot.

I would like to have your confirmation on the required specification for the servers with Foxboro application. Technically, we will use the existing servers that we have as per snapshot below

OPSR03555: ALTUM Development Server with Foxboro and Exapilot.

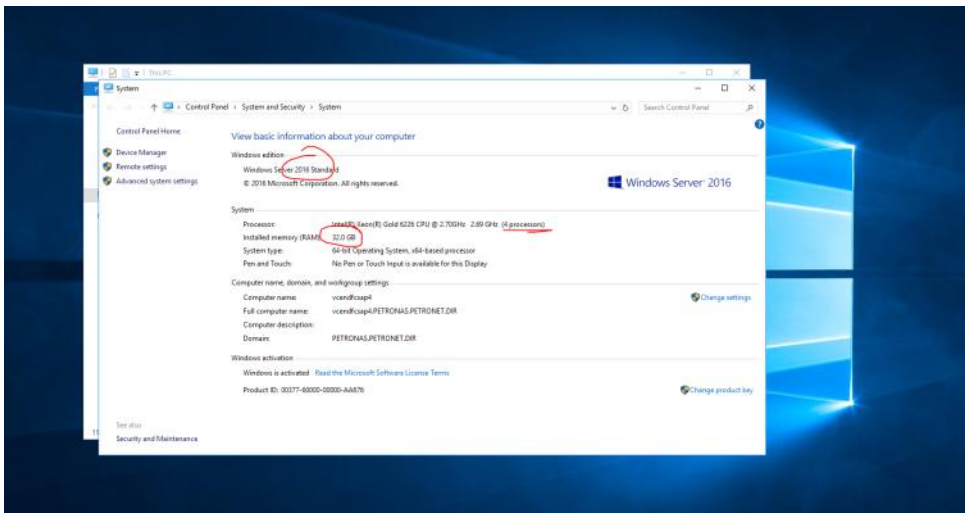
1) Foxboro OPC server (Please refer Item No 7)
Windows OS 2016
vCPU: 4
vRAM: 16GB
Proposed storage of Demand: 250 GB (do you plan to add or change?)
Local disk : 200GB

2) Foxboro DCS server (Please refer Item No 8)
Windows OS 2016
vCPU: 8
vRAM: 32GB
Proposed storage of Demand: 1024 GB (do you plan to add or change?)
Local disk : 200GB

4	Application	Non-Production	vcendopcap2	Cisco UCS	TPLT_W2K16	4	16
5	Application	Non-Production	vcendfcsap1	Cisco UCS	TPLT_W2K16	4	16
6	Exapilot	Non-Production SOD:250GB	vcendfcsap2	Cisco UCS	TPLT_W2K16 OS 2016	4	16
7	FOX OPC	Non-Product SOD:250GB	dfcsap3	Cisco UCS	TPLT_W2K16 OS 2016	4	16
8	FOX DCS (higher spec)	SOD:1024GB	fcsap4	Cisco UCS	TPLT_W2K16 OS 2016	8	32
9	Application	Non-Production	vcenddcsap1	Cisco UCS	TPLT_W2K16	4	16

Please advise whether the spec is sufficient or any additional spec that you want to propose.

Your response and feedback are highly appreciated.



List of VM created for OPSR03555 (#a)

Upgrade VM from existing OPSR1874 with eCIRF No: CIRF-11296838

SECTION A: DETAILS OF REQUESTED COD AND SOD

COMPUTE SUBSCRIPTION- SEE NOTES BELOW (COMPULSORY FIELDS)

NO	FUNCTION	ENVIRONMENT	HOSTNAME	FARM	OPERATING SYSTEM	vCPU	vRAM (GB)
1	Application	Production	CEN302EXAPILOT1	Cisco UCS	TPLT_W2K19	4	16
2	Application	Production	CEN302FOXBOPC01	Cisco UCS	TPLT_W2K16	4	16
3	Application	Production	CEN302FOXBDCS01	Cisco UCS	TPLT_W2K16	8	32

STORAGE SUBSCRIPTION - ADDITIONAL DISKS

STORAGE TIER	SIZE (GB)	DRIVE LETTER & DISK TYPE	HOSTNAME
Standard	250	M	CEN302EXAPILOT1
Standard	250	K	CEN302FOXBOPC01
Standard	1024	N	CEN302FOXBDCS01

Meeting 20/6

1) To get update from all vendors
2) To confirm on the payment milestone

Knowledge

Friday, March 22, 2024 10:35 AM

Why put in LOCAL in L3.5:

1) Software compatibility - Issue dengan PETRONS IT punya policy
2) AUTO restart server - PETRONAS IT takleh configure to be manual. APC cannot be turned OFF automatically.

Meeting Yokogawa Manangement 5/9/2024

Thursday, September 5, 2024 9:37 AM

Salient Points:

1. Tested on MDE, the application running well,but cannot communicate with other servers. Bobby responded the MDE should not block any communication , Firewall did. Try again and reconfirm with ICT. End of October
2. To push Exapilot ,PACE altum servers to domain. And test for MDE later.

Yokgawa Management Meeting - 13/5 2025

Pele,
Hamdan
Paul
Elida
Suraya
Hanim

Fadillah
Fauziah
Amin
Asraf
Hizami

Online:
Hilda
Shanmuganathan (Shan)
Shaiful

Mr Tee (Tee Kim Hong)
Mr Tan Eng Bee

Https = under Development team in India. Most probably by using patches, to comply with HTTPS EDGE will be supported R0.5.6, but latest update from Product Development team delayed in 2026 .but there is patch .5.05.10 , to allow compatibility with EDGE, no cleear timeline,but expected to be in Sept

5.03, working on di HTTPS, 5.05.10 can solve EDGE compliance,and HTTPS.
Target 1 month to complete.

Exapilot join domain,and test against Yokogawa DCS first.End Of May

Mr Tee have tested the MDE, and Yokogawa to provide report to PDSB.

To discuss again on McAfee OT. Usually the patch will be 1-2 month later,after the testing by Japan team.

Yokogawa DCS GFA

Thursday, March 13, 2025 9:14 AM

1) 6 documents involved in the GFA.
2) Team to focus on SOW, Schedule of Rate, Technical Criteria Evaluation,

To be submitted as ITB.

Name	Status	D
1. Exhibit I - Mock MTO Attachments	✓	1
1. Exhibit I - Scope of Work	✓	1
2. Exhibit II - Technical Specifications	✓	1
3. Exhibit III - Contract Price Final	✓	1
4. Exhibit IV - Obligation of Parties	✓	1
5. Exhibit V - Health Safety Environment Requir...	✓	1
5. Exhibit V(A) Consequence Management for H...	✓	1
5. Exhibit V(B) ZETO Rules Non-Compliances	✓	1
5. Exhibit V(form) - Contractor HSE Capability E...	✓	1
6. Exhibit VI - Administrative Procedures	✓	1
7. Exhibit VII - KPI	✓	1
8. Exhibit VIII - List of Participating Companies	✓	1
9. Exhibit IX - General Terms and Conditions	✓	1

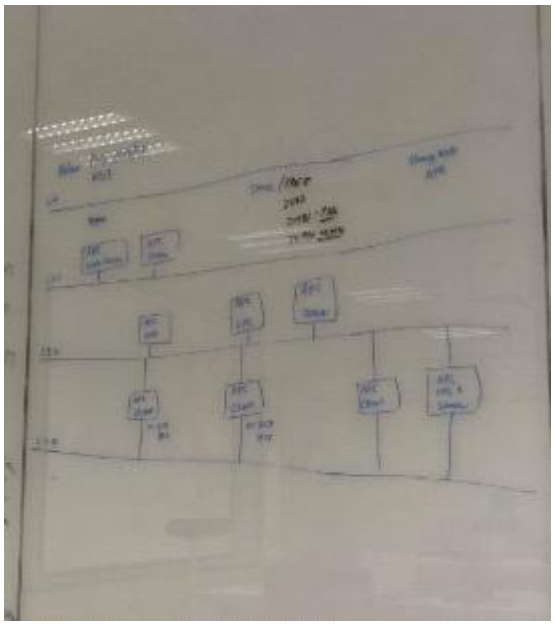
Type: Adobe Acrobat Document

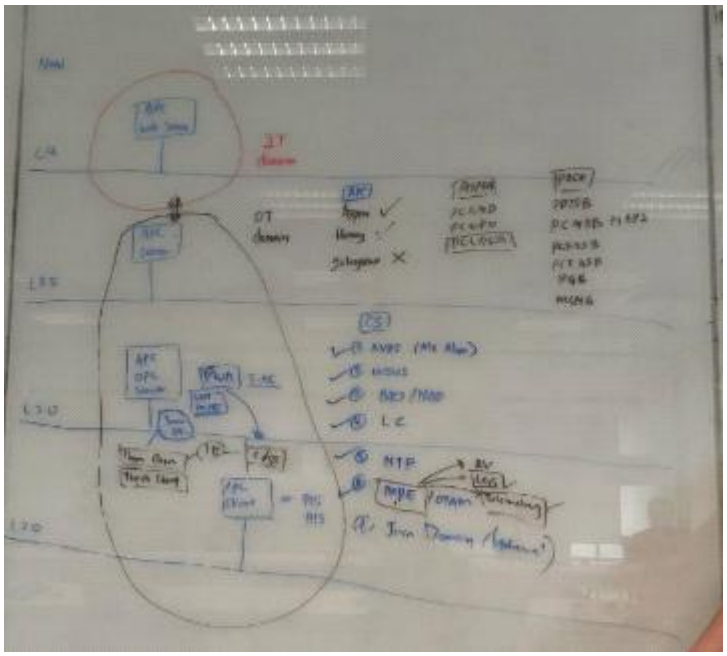
PACE APC Application Servers Setup

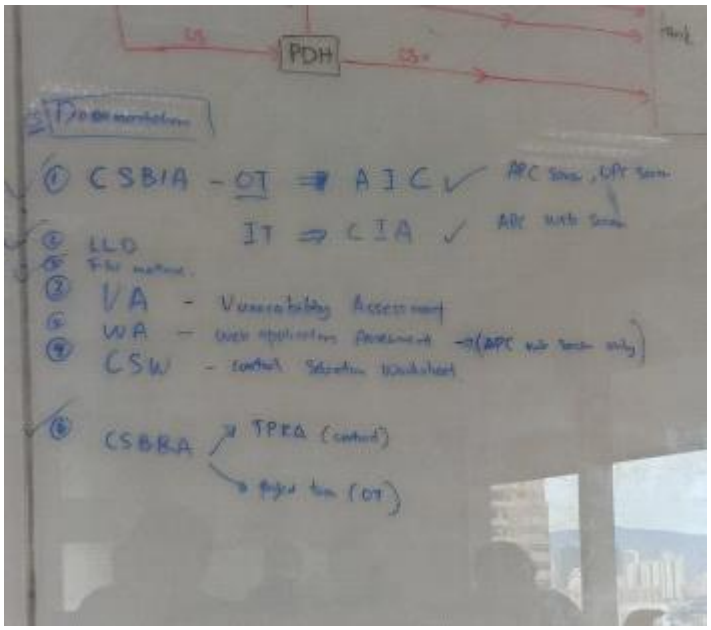
Tuesday, December 10, 2024 9:46 AM

10/12/2024 - 930AM

PCMSB Plant 1 nak install Web Server, but a lot of issues.
DMZ - a lot of data transfer , inviting a lot of people,webserver broadcasting data.



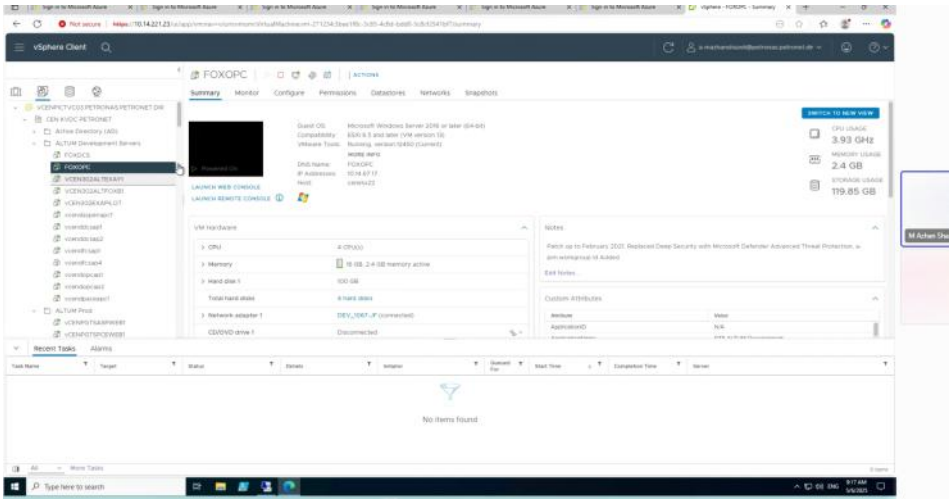


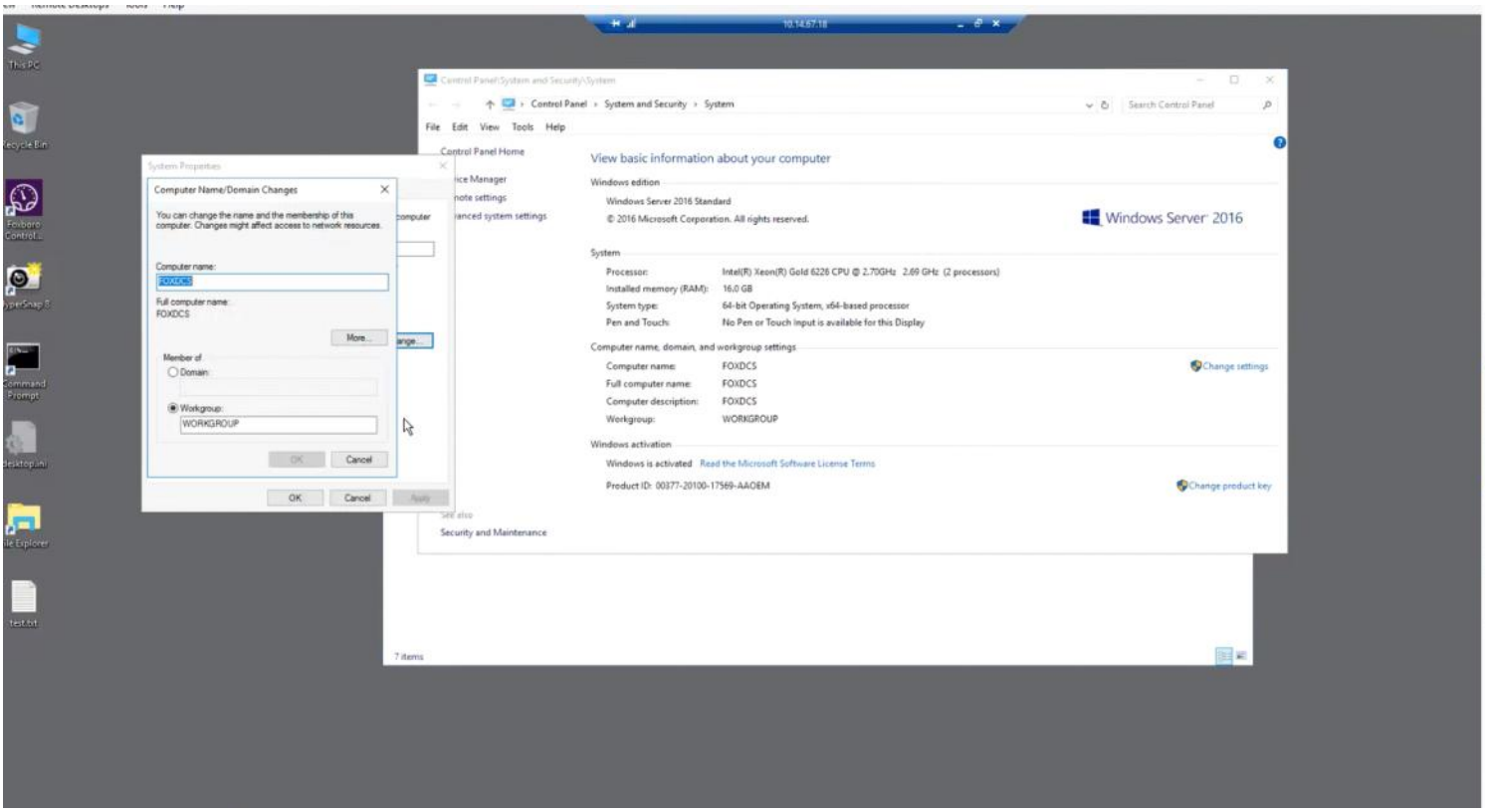

PDH
CSBIA - OT ⇒ AIC
IT ⇒ CIA
LLD
VA - Vulnerability Assessment
WA - Web Applications Assessment
CSW - Control Selection Worksheet
CSBRA
TPRA (control)

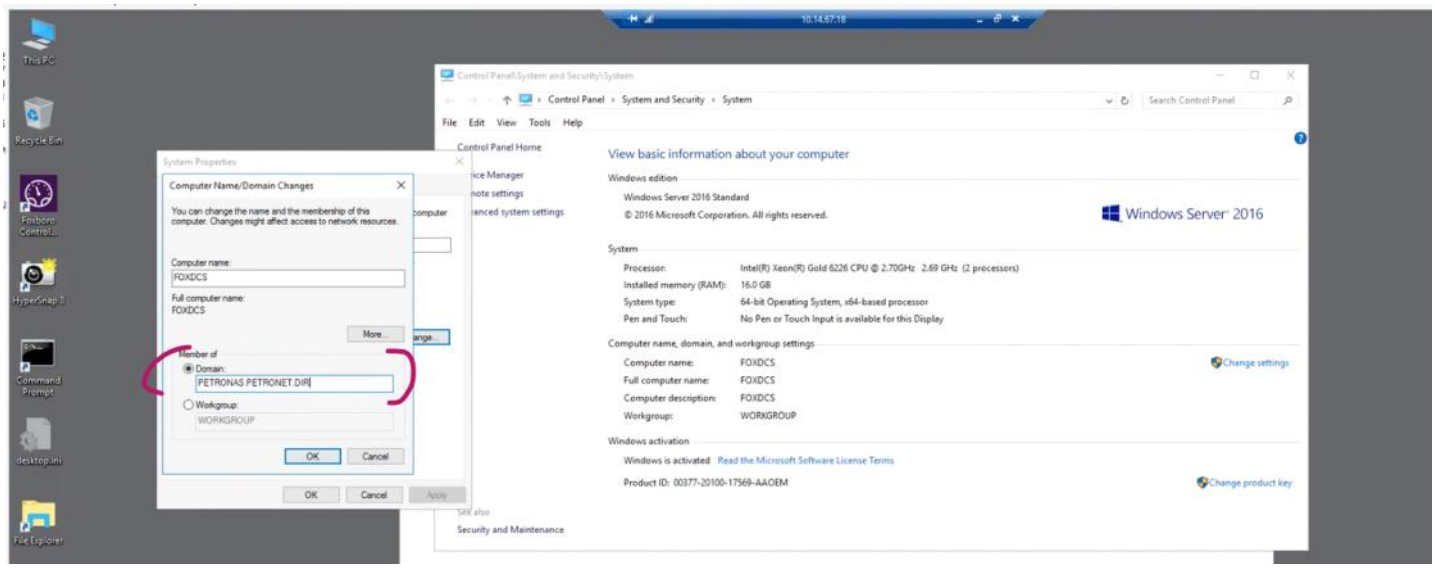
Technical Knowledge

05 June 2025 09:16

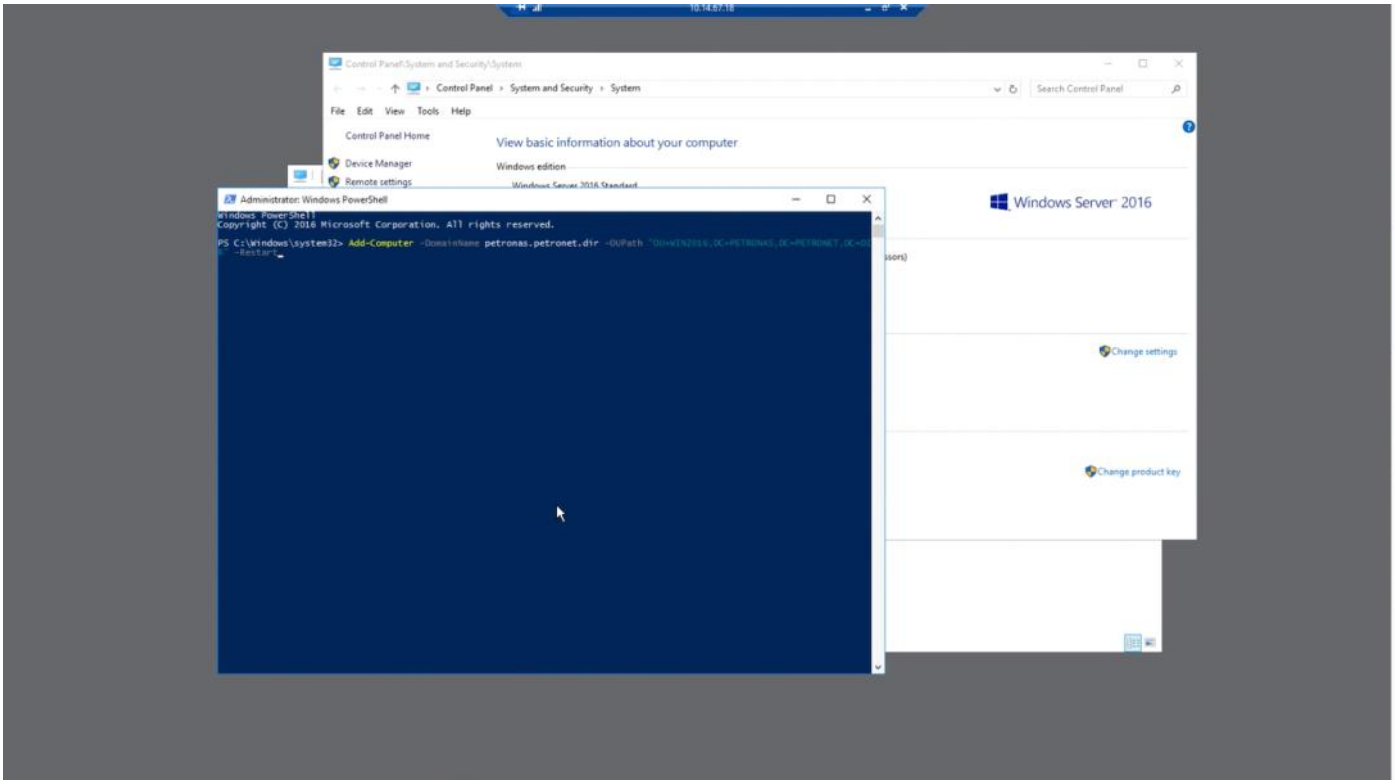
Join Domain (5/6/2025)







OK
Cancel
Apply
Product ID: 00377-20100-17569-AAOEM
Change product key
See also
Security and Maintenance
File Explorer
test.txt
7 items


Control Panel\System and Security\System
Control Panel › System and Security › System
Search Control Panel
File Edit View Tools Help
Control Panel Home
View basic information about your computer
Device Manager
Remote settings
Windows edition
Windows Server 2016
Change settings
Change product key
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.
PS C:\Windows\system32> Add-Computer -DomainName petronas.petronet.dir -OUPath
-Restart

HR AM

Thursday, September 22, 2022 3:44 PM

Department	Name	Email
GTS & NC	Iqah Zubaidah Osman	iqahzubaidah.osman@petronas.com.my
GPD	Muzammil Mazlan	muzammil.mazlan@petronas.com.my
IRSO EC	Nuraini Suhaila M Shatar	nurainisuhaila.msha@petronas.com.my
IRSO WC	M Afiq M Radzuan	mafiq.mradzuan@petronas.com.my
IRSO Southern	Nur Diyana Rifhan Mahmud	Nurdiyanarifhan.mahm@petronas.com.my
IRSO Sarawak / Sabah	Mohamad Haniff Awang Suhaili	mohamadhaniff.awang@petronas.com.my
GR&T	Rahmathul Yasmeen M Ayoob	yasmeen.ayoob@petronas.com.my
Corporate Office (GTCM, HRM, P&CS, TO, HSE)	Nurhafizah Bt Hussin	nurhafizah.hussin@petronas.com.my
Group Digital	Bernadene Simonne Wilfred	bernadenesimonne.w@petronas.com.my

I'm from GTS, who can I contact for HR matters?

HRM/PD&T

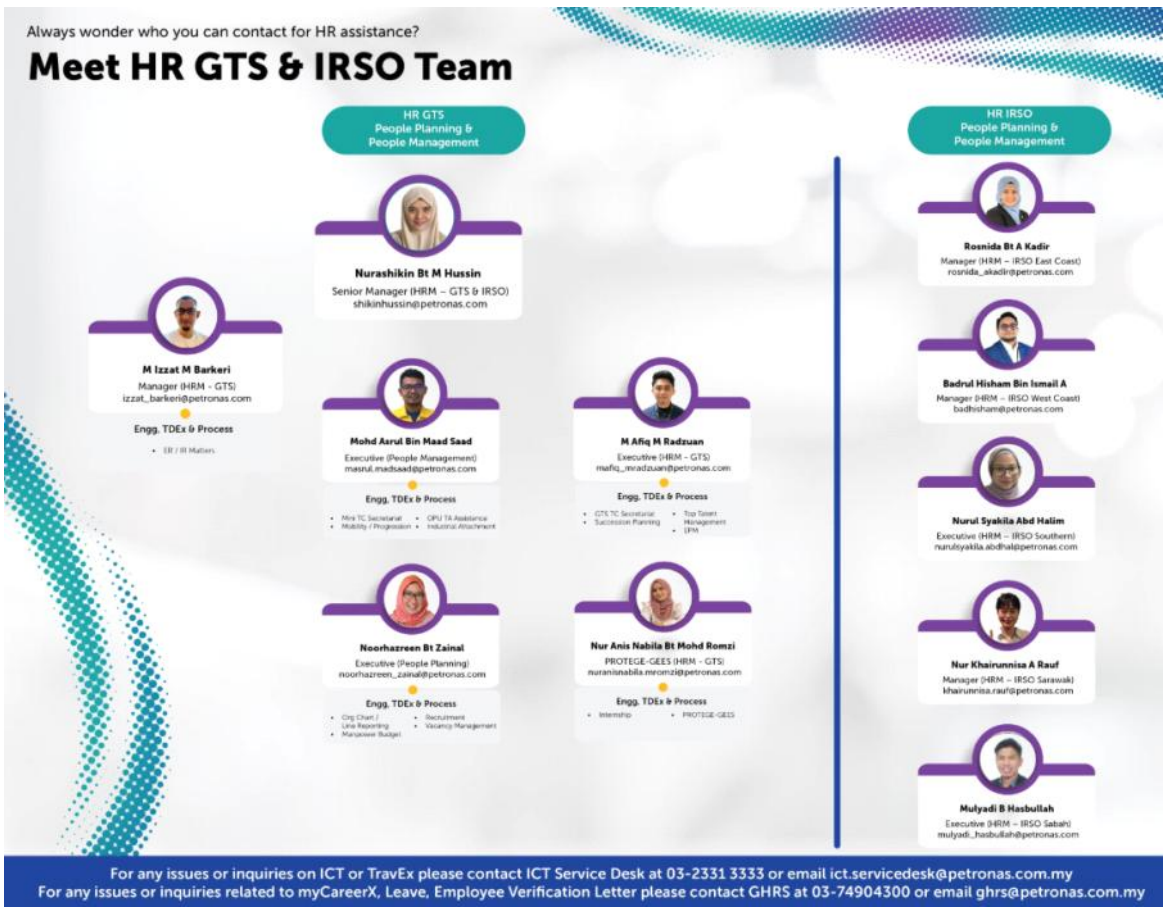
To

Cc Aerna Wani Bt Ahmed (HRM/PD&T); M Faizul A Kadir (HRM/PD&T); Nabilah Mat Asri (HRM/PD&T); Iqah Zubaidah Osman (HRM/PD&T); Noorhazreen Bt Zainal (HRM/PD&T); M Asrul Mad Saad (HRM/PD&T); M Ariff Alimeen M Hashimi (HRM/PD&T)

Reply | Reply All | Forward

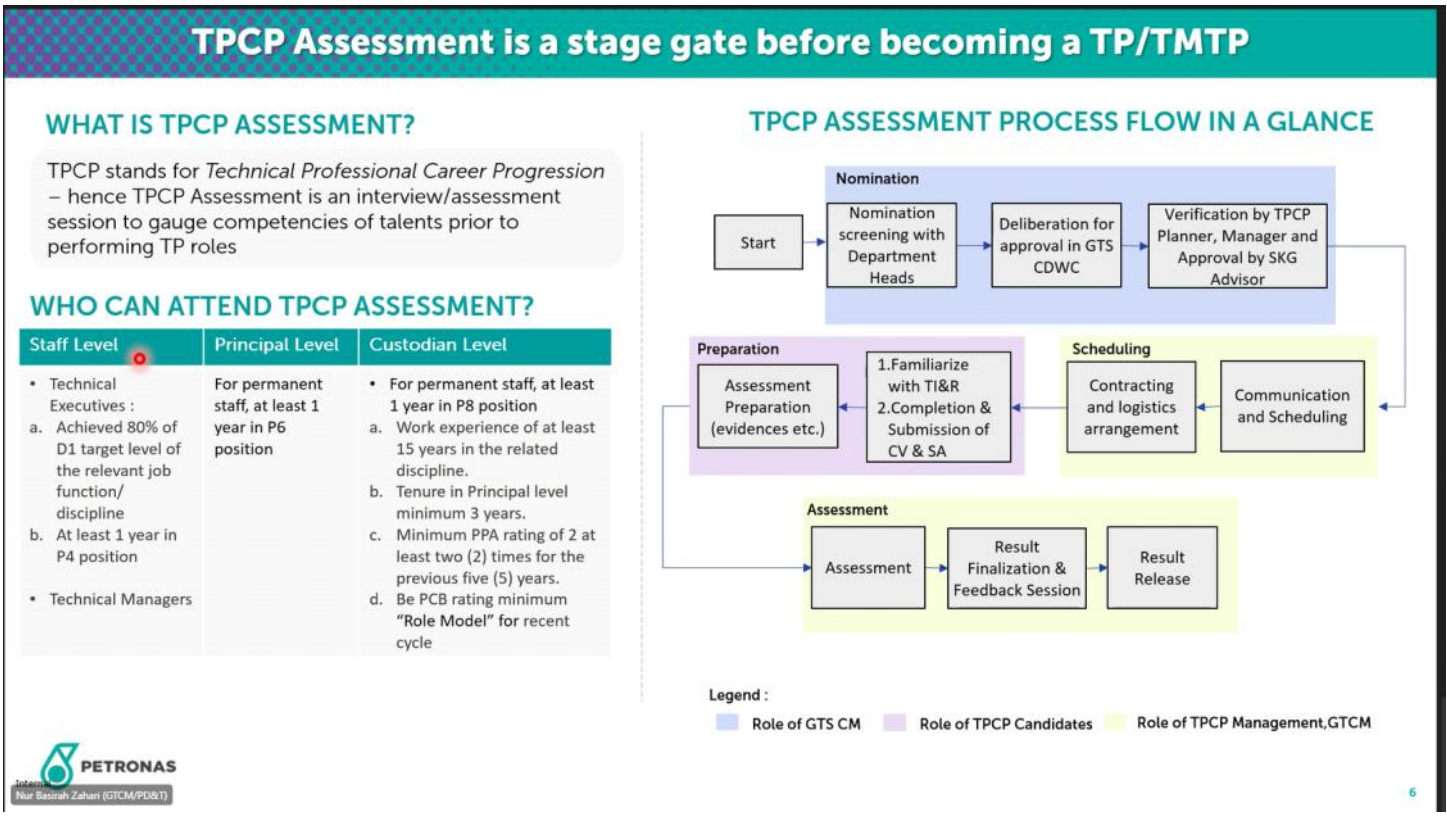
Fri 2/3/2023 6:26 P

2025



GTCM

Monday, June 26, 2023 2:34 PM



What to expect : Before TPCP Assessment

Candidate Roles:

- Familiarize self with the TI&R and Descriptors *(myPETRONAS)*
- Prepare CV and SA (Self Assessment) in **ASCENT-TPCP** *(https://ascent.petronas.com/tpcp)*
- Submit CV & SA in **ASCENT-TPCP** two (2) weeks prior to the assessment date *(ASCENT-TPCP step-by-step guidelines will be provided for reference)*
- Compile appropriate documentations for 'evidence'

Supervisor Roles:

- Verify candidate's CV and TKH self assessment
- Make arrangement to be present during assessment (mandatory)

Have you attended TPCP assessment before 2018? If yes, kindly observe the system behavior as follows :

For 1st time candidate using ASCENT TPCP Platform:

- ASCENT TPCP is established since 2018. The changes in TI&R will have impact to the assessment results conducted prior to the change i.e. mapping of the previous assessment result to the revised TI&R.
- For the previous TPCP assessment score (before 2018), talent is required to key in his/her previous/ mapped scores into the system.
- You are required to tick/select all/selected TIs in the SA page.
- For TIs that you have closed/not plan to be assessed on, please choose the score according to current/mapped scores.
- If you choose not to write SA for above TIs, in the justification field, you may fill in 'gap closed' or 'not to be assessed' (*not recommended!*). The system does not allow any field to be left blank prior to submission.
- For TIs that you need to be assessed on, please include your self-rating score together with detailed justification as required.
- **It is highly recommended to write your SA for all TIs even though you have met some TIs to portray continuous development & integrated learning process from Staff to Custodian level.**

(For Reassessment candidate – no mapping needed if previous assessment using latest TI&R version (eff 1 Jan 2020))

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Nur Basirah Zahari (GTCM/PD&T)
Internal

EAS PROCESS

06 February 2026 15:23

MBU

KPI Design & Key Roles of Each Level

Revamping how each role generates value by emphasizing key focus areas and their anticipated results

DESIGN PRINCIPLES

Clarity over Coverage

Fewer KPIs, but with sharper and clearer focus

Impact over volume

Reward Impact and productivity, not busyness

Horizontal value creation

Stronger incentives for Molecule-Chain thinking

Role-appropriate accountability

KPIs match decision rights and role expectations

Executives	TP Staff	TP Principal
"Strive to Delivery Quality with Pace"	***"The Accountability Anchor"***	***"Molecule Chain Value Driver"***
1. Delivering with pace 2. Upholding quality of delivery 3. Impact of Effort while demonstrating desired behaviors	1. Structured Work Planning 2. Provide timely technical consultation 3. Step-in decisively when dealing with risk	1. Value & Impact created for MC 2. Number of actionable ideas into real outcomes 3. Recognition as trustable partners to Business

KPI CASCADING SAMPLE

THINK TANK			DELIVERY	
SRD / SD	MC Leads	Principals	Staff	Executives
Improve **enterprise molecule value chain by 2%**	Improve **enterprise molecule value chain by 0.2%**	Pain-point based **solution deployment**, acknowledged by OPU	**Strategic planning** of execution, **demonstrate accountability** of task outcome	Ensuring **quality delivery** of assigned task within **allocated timeline**

PETRONAS

Petroliam Nasional Berhad (PETRONAS) | 6

Monthly Meeting

17 March 2026 10:02

Minute 54..secretariat/?

UPGRADING TERM OF REFERENCE

Upgrading is a progression within the same role based on demonstrated progressive increase of required competencies and sustained performance.

YEAR IN SALARY GRADE (SG) & PPA

- Minimum performance rating of 3/3S across the last three performance cycles. Employees with higher performance ratings (1, 2, or 3H) may be considered for earlier progression, subject to a minimum of 12 months after the last upgrading. Rating distribution across the 3-year PPA cycle:
  - 2+2 – 2 years
  - 2+3H – 2.5 years
  - Solid 3/3S – 3 years
- Cases with 3L within the 3-year period will be reviewed on a case-by-case basis

SMA

SG	SMA (EDGE %)	SMA (Technical %)	Remark
P1 to P2	25	50	Technical SMA is based on new core generic TIs
P2 to P3	50	100	
P3 to P4	75	70	
P5 to P6	50	50	Technical SMA is based on TPCP TIs
P7 to P8	50	50	Technical SMA is based on TPCP TIs

Sticky Notes

Thursday, January 26, 2023 10:30 AM

PW (a- account)

(1[d*<),mZ~4FN

To add user,please add new user in

Name	Description
Access Control Assist...	Members of this group can remot...
Administrators	Add CR Temp T1 Server Operators...
Backup Operators	Backup Operators can override se...
Certificate Service DC...	Members of this group are allowe...
Cryptographic Operat...	Members are authorized to perfor...
Distributed COM Users	Members are allowed to launch, a...
Event Log Readers	
Guests	Guests have the same access as m...
Hyper-V Administrators	Members of this group have com...
IIS_IUSRS	Built-in group used by Internet Inf...
Network Configuratio...	Members in this group can have s...
Performance Log Users	Members of this group may sche...
Performance Monitor ...	Members of this group can acces...
Power Users	Power Users are included for back...
Print Operators	Members can administer printers ...
RDS Endpoint Servers	Servers in this group run virtual m...
RDS Management Ser...	Servers in this group can perform ...
RDS Remote Access S...	Servers in this group enable users ...
Remote Desktop Users	
Remote Management...	Members of this group can acces...
Replicator	Supports file replication in a dom...
Storage Replica Admi...	Members of this group have com...
System Managed Acc...	Members of this group are mana...
Users	Users are prevented from making ...
ADS_MANAGER	
APC_OPC	
ConfigMgr Remote C...	Members in this group can view a...
CTM_ENGINEER	
CTM_ENGINEER_ADM	
CTM_MAINTENANCE	
CTM_OPC	
CTM_OPERATOR	
Hybrid agent extensio...	Members in this group can retriev...
OPC_USER	
XEQ_OPC	

Note to do;

EASPCEASPPRD01.\aspenADMIN
aspenDMC@!2020

Device Management ---laptop

To do:
SOW One Stop Centre
Inventory
CO2eq calculation
YK Engagement meeting - 2nd week Jan.check masa kak oji
PML Cost Proposal

U/N= administrator (1)
PWord = petronas

U/N= administrator
PWord = vigilance

1)after first batch,boleh estimate bila transition 1pm
2)after prime, 9pm ada lab sampling..if required boleh request lagi
3)ubah external target mapping
4)tuning

admin351pet

Tuning
2:50am Movsup Diepress.sv 15-->23
3:30am Movsup Diepress.sv 15-->23

Tuning 17/6 1100PM
1100PM - Movesup diepress 18 --> 25
154AM Movesup diepress 25 --> 27
530am Movesup CTA 1--> 4
716am Movesup CTA 4--> 2

Tuning 18/6
1100PM Movesup CTA 2--> 3 (nampak ok)

Tuning 19/6
1130PM Movesup CTA 3--> 3.5
11:39PM Move resolution 0.1 --> 0.2
Low limit diepress 53.5 --> 53.2 revert back

Tuning 23/6
510AM - Movesup diepress 18 --> 22
655AM - Movesup diepress 22--> 25
800 AM - CTA Low limit 470 --> 465 / Diepress high limit 49 --> 49.5

Tuning 23/6
902PM -Movesup CTA 2--> 3.2
140AM -- Movesup diepress 22-> 23.5 revert --22
3:10AM -- Dynamic target concern 0.05 --> 0,035

Umum
8/6/20 First survey rumah BA2
12/6/20 Survey rumah BA1
13/6/20 Confirm BA1

Contoh rumah

https://www.mudah.my/Renovated+Banjaria+Court+Apartment+Batu+Caves-81328703.htm#show

CIMB
Loan amount RM 461,700.00
Legal fee RM 10,550.00
Valuation fee RM 1500 (subject to final quotation)
MRTT RM12,858.00@25yrs
Total loan amount RM 487,308.00
Loan 35yrs
Rate 3.3%
Instalment RM 1,957.94/1955

MAYBANK
90% loan,461700
Legal fees,9300
Valuation fees,1500
MRTT,14373 @ 30yrs
Total,486873
Tenure,35yrs
Rate,3.35%
Instalment,1971

RHB
-rm461,700 @90%
legal fees financed rm10,260
MRTT rm15,244 @26years
-3.3%
-35yrs
-not inclusives valuation fees
-islamic full flexi
-monthly rm1,958

Final (CIMB)
Loan amount RM 461,700.00
Legal fee RM 10,550.00
Valuation fee RM 1,500.00 (subject to final quotation)
MRTT RM12,858.00
Total loan amount RM 486,608.00
Loan 35yrs
Instalment RM 1,955.13

To do

Monday, March 4, 2024 8:58 AM

Web servers (update by dillah)

1. Successful HHTPS connection established for PACE
2. RA with PCMSB for PACE replication
3. arranged meeting up with PCLDPE for potential replication
4. sent email invitation to faiz on 20 May 2025, cc Dr thana and Fauziah

Development Servers: (update by Amin)

1. push exapilot server to domain
2. email abu, cc to khairul and emod for resolution date, sent invitation to come to GTS for close out
3. to update new TM on project progress
4. target to push all servers to domain before 30th May 2025

DCS GFA (Amin)

1. tabulate scope for work for APC and Exapilot - reach out to sheema to fill up,
2. follow up with Shareen GP to lodge official complain and if possible penalty (worst case scenario). put in details where yoko had delayed their services.
3. follow up with iiyas on the date to conduct groupwide syndication for Adanvced solution APC/PA Enterprise agreement riding on DCS GFA.

network issues (Amin)

1. to arrange a meeting with PDSB and 3 OPUs focal with ongoing OPSR PACE projects this yr PCFSSB, PCMSB, PCFKSB, PPTSB, MLNG

GD Process Control Training Request by Bobby (dillah)

1. reach out to bobby to nail a date.

-Go through EOG application - the target to establish connection,and later can be used utk FAT,dan any activity related
-Kita da buat utk PACE-FOXBORO, EXAPILOT-FOXBORO. Cuma untuk EOG ni,kita face some difficulty dekat part Foxbridge,memandangkan facility kita pun tak 100 sama dengan site.
-Kita buat work around, guna yang standard/biasa punya cara la.
-Sebab agak besar juga la controller EOG ni, utk testing sahaja, kita reducekan number of subcontroller,MV,CV.
-Abu kena buat some programming dekat DCS,utk establish communication.
-Conclusion - kita dah berjaya establish communication, boleh turn ON controller. Later , kita akan bring these servers to join domain,and akan revalidate semula la

Target:
-Lock schedule utk EMICON,PEMS validation etc.
-Bila kita boleh meet utk EQA?

-We plan to commission EMICON. Data yang kita ada buat modelling, during step test last year, paling tinggi 50 , normal 36/37 dan lowest 25.
-Jadi masa kita nak commission ni,kita plan utk validate inferential kita,validate maksudnya collect actual data dan compare dengan prediction inferential kita.
-Cuma berbeza dulu sekarang, total steam generated ni way below masa kita step test haritu. Satu disebabkan CGC kita lebih efficient,so lebih banyak HP di header.
-Disebabkan tu, kita target to find opportunity ketika 5F so that kita ada margin to validate dan commission at higher load. Around 40t/h kot with current condition.
-So this meeting ni, kita lebih pada nak seek OPN punya opinion how we can conduct the activity-validation dan juga commissioning.
-ada tengok IP21 data masa bulan May. 5F - total steam lebih kurang 86t/h..tapi data terbaru tengok semalam. 5F total steam da 80~82t/h. Jadinya, margin utk kita gerakkan lebih tinggi tu, jadi semakin

kecil……melainkan kita boleh consider utk ada venting nnt.

Talent Placement:
Phase 1: most senior..starting soon
Phase 2: By Q4. PT&HSSE Enablers and bussiness

Next Chapter:
1)career counselling,upskilling,reskilling by KornFerry
2)connect with right job opportunity
3)linkedin premium
4)perkeso job of the future - mental helath support, transition allowance
5)if nak bussiness, PING offer pathway to entepreneurship

Leave

Tuesday, March 11, 2025 2:44 PM

In Lieu -

Working on weekend di PML2 -U300 BLC Rectification (1MARCH)
Working on Public Holiday PML2 - Nuzul Quran (18 March)
Woking on weekend for PEMS - Sunday (23 March)

To do

Friday, February 24, 2023 3:57 PM

1) SOW Yokogawa
2) OPSR Inter Trust Domain
3) PML2 Aries Data

Faizal 012-6094526

88/head-118/head

013-3377933 din

13039
11289
90312

ASMA Meeting

Wednesday, May 17, 2023 9:26 AM

PETI Inspection

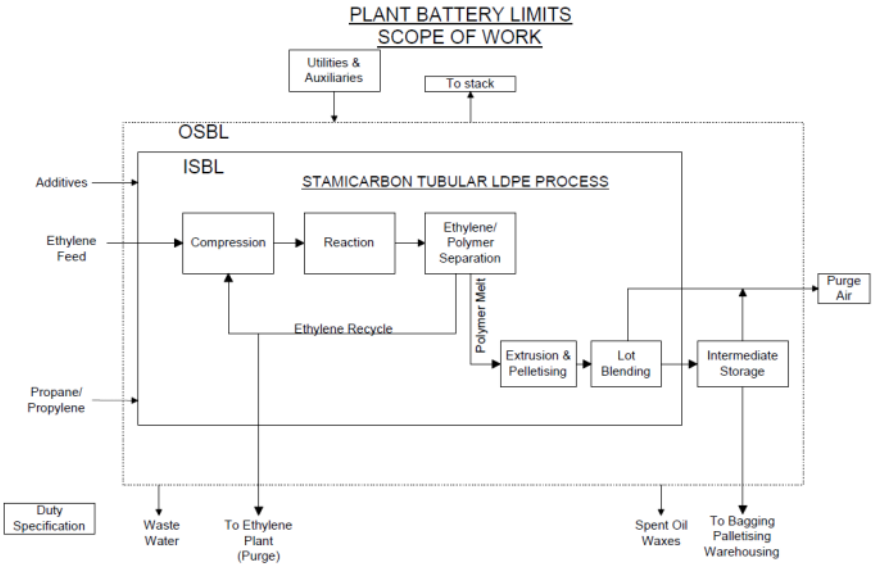
KOM Meeting

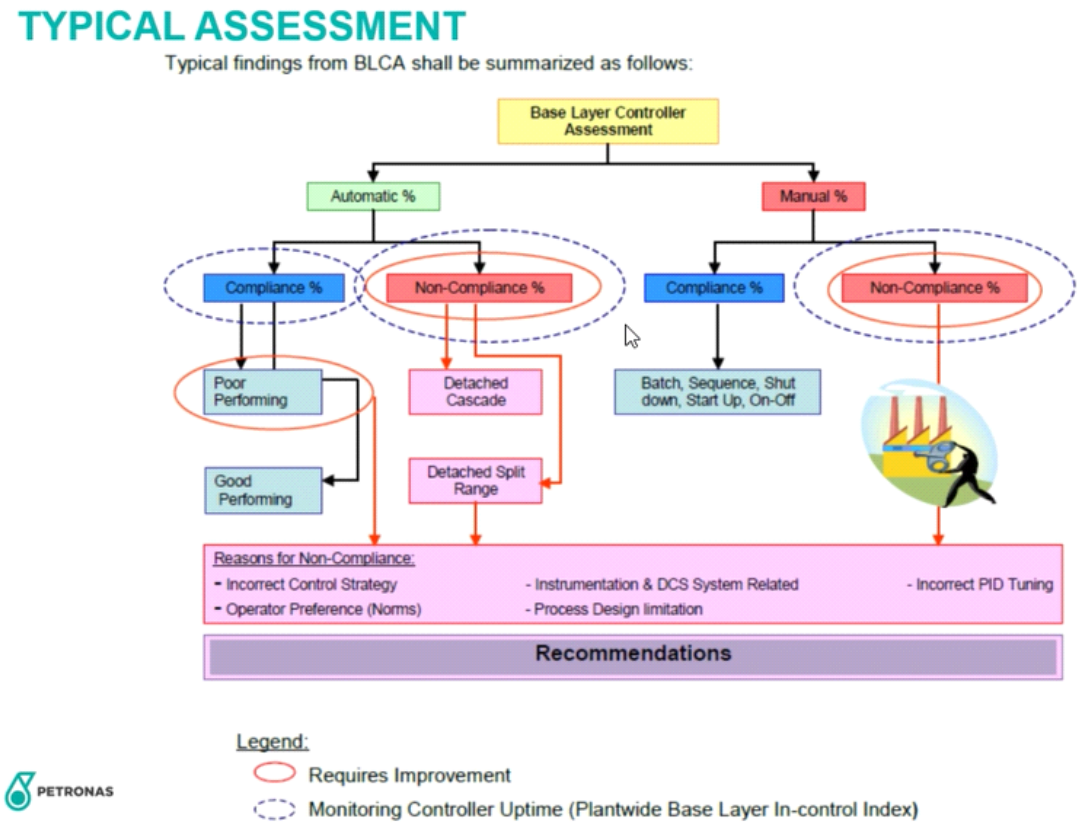
Monday, January 15, 2024 10:27 AM

1. Introduction to team members
2. Define scope and expectation
3. Timeline
4. AOB
    a. Aspen study-benefit study

Possible trip:
Familiarization and Interview
Data Collection and BLCA
Workshop FDS

Information Required:
Process Description Offsite Unit
Process Description fr Additive





Additive

Thursday, March 14, 2024 10:33 AM

C150Y dan N125Y - Common grade
Akan pakai 3 3 additives

Ada yang pakai anti oxidant sahaja

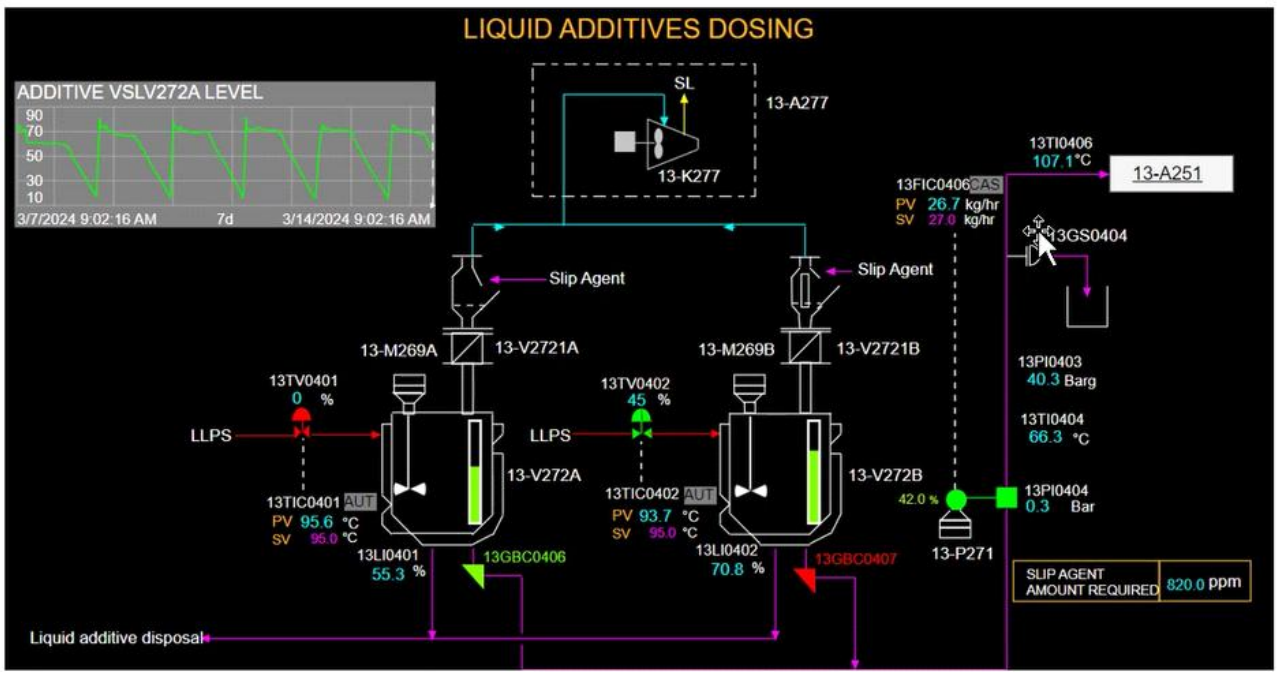
M050X M022 takde additives

Method of controlling and Monitoring

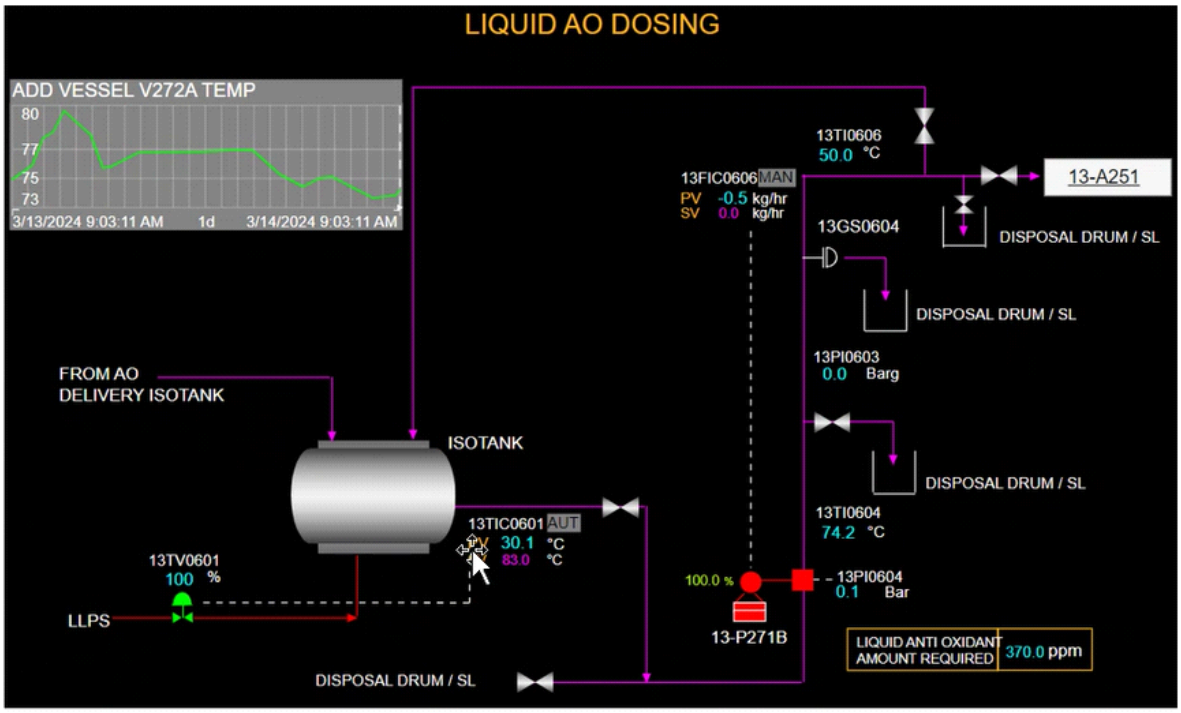
- 13FIC0406,13FIC0606,13FIC0211 control in CASCADE mode (Motor and Production rate)
- Target for each additive as per attachment :

Slip Agent	Anti Oxidant	Solid Addtive - AB
750PPM	350PPM	850PPM

Liquid lagi murah berbanding solid



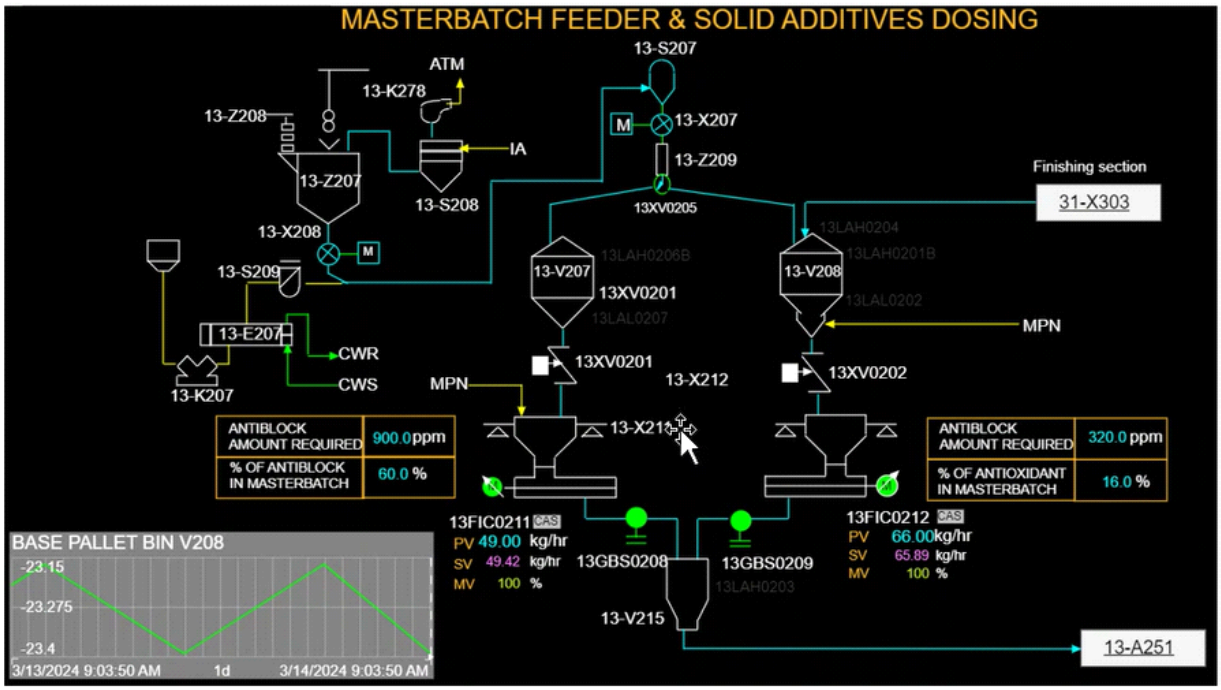
Liquid AO – Anti Oxidant



Kalau tak guna additive, akan adjust block valve di site utk circulation.
Lab result - every 15 min

Production biasa 30 tan.
Biasa akan letak higher additive.safe side..kalau too low,takut offspec

Solid Additive



Normally pakai ya 13-X211 (V207 -FIC0211)

13FIC0212 - NORMALLY ON STANDBY.CUMA LIQUID AO ada issue.kita guna solid AO
Masukkan PPM target

Semua akan masuk dalam main extruder

Boleh buat test manual,tapi kena pergi ke Polyethylene. Dalam 30min

Additive - 1 kotak -400kg..level naik 75%..jadi 15%, akan swap yang akan standby. Biasa 400kg ,boleh pakai dalam 12 jam
AO topap masuk isotank.18t untuk 3 bulan.
AB topap - topap 2 t, every 2 days..jangan kasi level low

Request:
Pricing -
Product Spec -
Lab result -

Search running ab,ao -guna APLAIRS*

Project Discussion

Friday, March 29, 2024 11:08 AM

BLCA -Ok

APC Benefit:

1) Reduce steam loss. Quite tricky sebab takde measurement . Kalau dari calculate Aspen macam lebih pada stability calculation..not direct reducing steam loss. Tak faham sangat concept aspen\
2) Increase pressure?bukan akan increase HP supplky juga ke?
3) Is there any other way to estimate benefit in steam saving? Equipment or unit basis?
4) Kalau naik pressure header, what happen to UK punya delivery.

Discussion with Prakarn

1)If increase the pressure, isnt it will increase the steam import as well? Any issue?
Since operation rarely change the steam pressure, do you see any other opportunity for steam reduction via stabilising the user?

-Increase condensate usage to reduce 21TI0107.

-Main steam -Preheater 11, RHPS
2)Kenapa tiada model Antiblock? -just typo

	CVs TAGNAME	ANTIBLOCK	SLIP	ANTIOXIDENT
MVs	Description	PPM	PPM	PPM
ANTIBLOCK_RATIO	ANTIBLOCK_RATIO		+	
SLIP_RATIO	SLIP_RATIO		+	
ANTI_RATIO	ANTI_RATIO			+
DVs				
PRODSPEX.PV	Production rate	-	-	-
SI0202.PV	MASTER BATCH SPEED	+	+	+
SHIC0104B.PV	EXT. SCRUW SPEED	-	-	-

Figure 13:APC ADDITIVE control matrix

3)What is the relation for Additive to additive flow? -find correlation between additive and lab result??petlin ada graph,manual etc?
4)How you plan to calculate for item 2 and 1 -UNDERSTAND

No	Source	Calculation method
1	Steam reduction from APC improves the standard deviation.	Number of Standard deviation reduction x process gain x operating hour ---------- SD=0.2004 % reduction by APC=30% RHPS flow gain = (- 654.4 m3/h) Operating hour = 8000 hrs/year ---------- Estimate the steam reduction= 0.2004 x 0.3 x 654.4 * 8000 = 314,740 m3/year
2	Steam loss to ambient at 21-V511	There is no measurement the steam loss to ambient therefore the monitoring point is total steam usage
3	Additive consumption reduction	The amount of additive decrease after APC turn on. (See table 1)

1) steam reduction tu dia refer to which steam. HPS imported?

RHPS header -

5) Any examle implemented dekat other site? No
6) Possible tak to email after this. - Yes
7) RATIO BLOCK issue -production rate. Not sure what is the basis of the calculation. Better put MV directly. FC etc

9) Cari user lain to reduce temperature/steam utilization

Update meeting

Wednesday, May 15, 2024 8:52 AM

15/5/2024

1) Prepartion for workshop. For steam, a bit tricky sikit sebab bila analyze, kita tak banyak handle yang normally operator. Kita akan focus more towards user punya side.
2) Planning - 28 jumpa panel, 29 worksho, 30 maybe akan jumpa panel lagi.
3) To ask - is it possible to step masa this visit? -step oeprating range, list of controller,step size.

Jan - May SR utilization:
RM46199.11
228.8hrs

Testing

Wednesday, June 5, 2024 10:52 AM

Erucamide:
10.52AM

FIC0406 - 28.2
SLIP AGENT: 850 --> 860

1141 (0.8/13) = 0.0615 0.06
Delta FIC -28.2 --29
SA = 778--791

1150
FIC0406 - 28.4
SLIP AGENT: 860 --> 850

1226 (0.3/11)
Delta FIC -28.7 - 28.4
SA = 789 - 778

2:27PM
AB - 910--920
FIC0211 - 50

PCLDPE Workshop Meeting

Monday, August 12, 2024 10:35 AM

12/8/2024 Meeting workshop:

Slip agent: Y grade only

- Tambah slide elaboration for benefit calculation.

180/50/10
180/50/0
220/50/0 -3:48pm
300/50/0 - 3:52pm

24/9 Closeout meeting

Development

Friday, July 14, 2023 3:23 PM

SMA

Competency Bench Strength Calculation

$$\%CBS = \frac{\sum\left(\frac{SMA\ Score\ (By\ Superior)}{Required\ Score}\right)}{Number\ of\ Total\ Inventory} * 100\%$$

TCL

Tuesday, July 25, 2023 10:47 AM

What will you experience at the critical check points (CP)?

Jun – Jul 23 | Jul – Sep 23 | Sep 23 – Feb 24

Nomination

CP#1
Shortlisted and validation of interest and experience

Screening

You're here now

25 Jul
CP#2
Intro Briefing by Top Talent Management Team

7 – 14 Aug
CP#3a
Online Assessment

28 Aug 23
CP#3b
Mock Graduate Mgmt. Admission Test (GMAT)

30 Aug 23
CP#4
Result Briefing by Top Talent Management Team

Exposure

Sufficient Exposure
Proceed to selection stage

Limited Exposure to Business/ Commercial Role
Mobilise and expose with business/ commercial role for 12-24 months

Selection

8 Sep
CP#5a
Essay Writing

CP#5b
Video Pitching

18 Sep onwards
CP#6
VP Interview

Dec – Feb 2024
CP#7
Preparation for Pitching
(recommended to proceed from VP Interview)

Feb/Mar 2024
CP#8
Pitching to PETRONAS Talent Council (PTC) Members

Mar/Apr 2024
Approval at PTC

Post Approval

GMAT (preparation and results)

Admission to business school

Fulltime MBA on campus

Post Study

On the job for development and exposure to commercial and strategic roles

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CP#3b Mock Graduate Management Admission Test (GMAT)

Familiarise and Practise GMAT

Sample:
https://www.varsitytutors.com/gmat-practice-tests

Take Mock GMAT (virtual)
9.00 am to 1.00 pm
28 Aug 2023 (GMT+8)

Note: we will inform alternative timing for international employees

What is GMAT
- Business school entrance exam that is designed to measure someone's preparedness for graduate business programs.

What does Mock GMAT test consist of?
- Quantitative
- Verbal
- Integrated Reasoning
- Analytical Writing Assessment

What is the minimum score required for Mock GMAT in order to enter to the next checkpoint of FLDP?
- 600

Steps to register for varsitytutors to practise GMAT

1. Go to https://www.gmatprepnow.com/content/veritas-prep-practice-test-free
2. Create a free account
3. Click Take A Test -> Select GMAT
4. You may explore the 'Learn by Concept', 'Flashcards' and 'Practice Tests'

Steps during Mock GMAT

1. Attend the Mock GMAT virtual session
2. Go to the Mock GMAT site (will be announced during the day)
3. Complete the Mock GMAT
4. Screen capture and save the image of the Mock GMAT score
5. Submit the screen captured and Mock GMAT score in the MS Form (will be announced during the day)

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:t us for further enquiries

Top Talent Management Team

Zainul Abidin Semangun@Suaib

Lee Yee Suen

M Syadiq M Sabri

Lim Boon Chin

HR Leadership Focal at respective Business

Upstream – M Nizam Halim

Downstream – Siti Zubaidah Jerai

PD&T – Desmond Sam

Gas & COO – Elya Haron

Corporate – W M Fayadh

HR – Anis Hafidza Makhatar

Finance – M Danial Aiman Sa'zali

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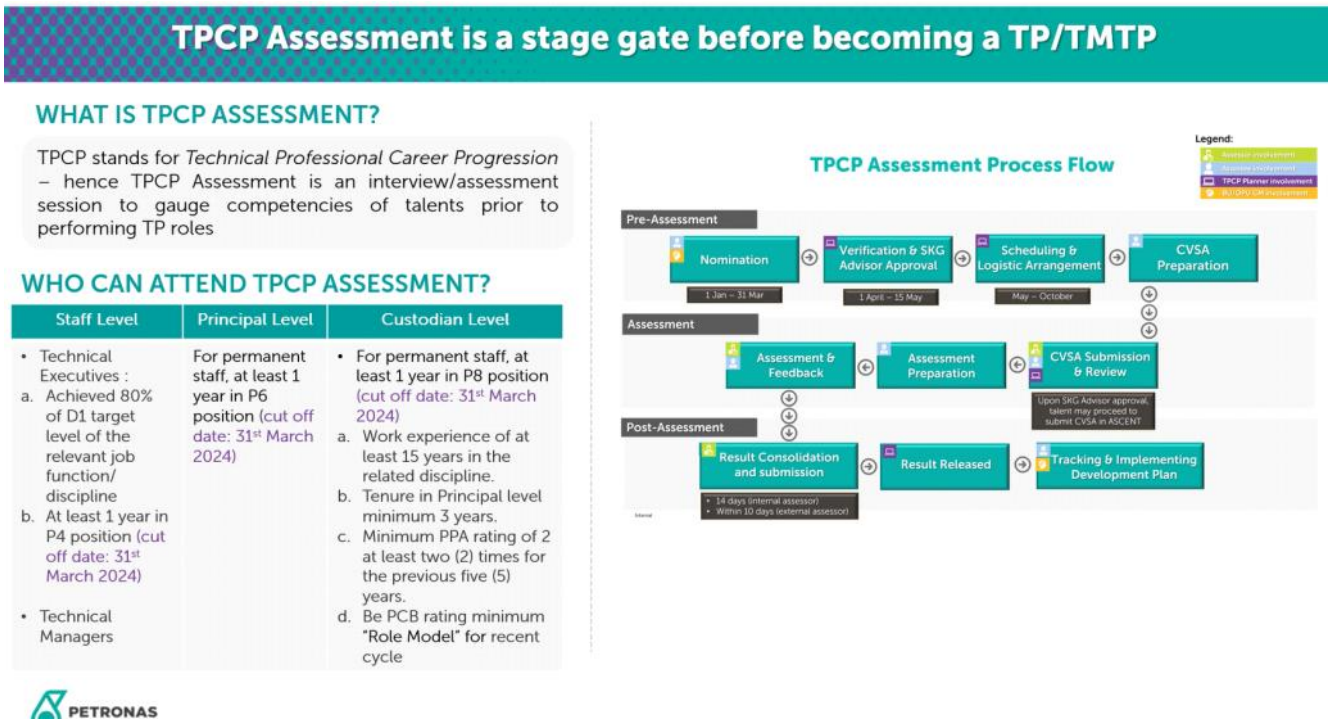
TPCP

Friday, May 3, 2024 11:08 AM

Date ke nk reschedule ke,contact management team



What to expect : Post TPCP Assessment

Feedback Session (*for Staff, Principal & Custodian Level*)

- Feedback session will be conducted to share assessment result and to discuss development plan.
- The session will be conducted by the assessor in the attendance of his/her supervisor (mandatory).

Assessment Result (in ASCENT-TPCP)

- Assessment result comprising TKH assessment scores and comments/remarks, Development Plan 1 (immediate & long term) and Development Plan 2 (gap analysis) will be disseminated to OPU CM. It will later be released to respective candidates and supervisors.
- Qualified TP : Meet 80% of Base, Key, Pacing & Emerging technologies, 100% CTI
- Qualified Staff TP In-Role : 60% of Base, Key & 100% CTI (P4 to P5)
- Qualified TMTP :

Upgrading/ Promotion from/to TMTP levels	Promotion/Upgrading Effective Date	
	1 April 2021 – 31 March 2024	1 April 2024 onwards
Promotion to Manager (Executive to P5)	TMTP talent progression is to refer to **GHRM L3 Progression Procedure (Item 4.1.2 and Appendix 3)** via Progression.pdf (sharepoint.com)	
Upgrading for Manager (P5 to P6)	Met 60% of Base, Key and 100% Compulsory TI (CTI) at mid Staff Level from TPCP assessment	
Upgrading for Senior Manager (P7 to P9) & above	Met 60% of Base, Key and 100% Compulsory TI (CTI) at mid Staff Level from TPCP assessment	
	*Based on Talent or Position	*Based on Position (Discipline TI discipline TI)
Promotion to Senior Manager & above (P6 to P7) & above	Met 80% of Base, Key, Pacing & Emerging and 100% Compulsory TI (CTI) at mid Staff Level from TPCP assessment	
	*Based on Talent or Position	*Based on Position (Discipline TI discipline TI)

Implementation & Tracking of Development Plans

- Supervisors are responsible in ensuring candidates are given the opportunity to close their competency gaps.
- OPU CM and supervisors to monitor the progress of the development plans and to discuss progress on quarterly basis in OPU CDWC session.

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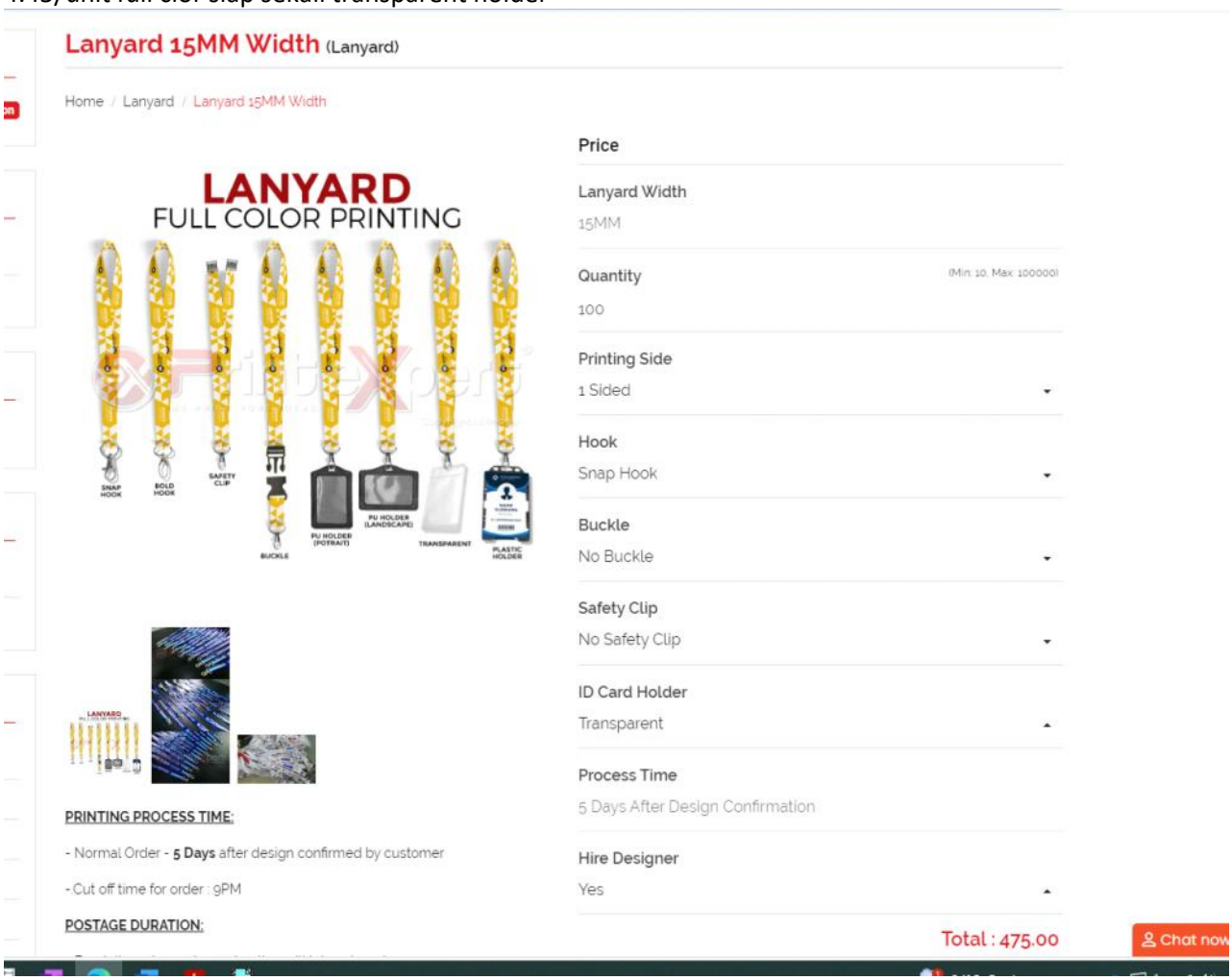
Registration

Friday, July 14, 2023 9:46 PM

Lanyard Printing in Malaysia - Print Expert - Highly recommended

4.45/unit full clor siap sekali transparent holder



1) https://greenworks.com.my/product/full-color-lanyards/

Ada variation. Cost dalam RM4..tapi full color RM5

1) https://www.printcious.com/my/bulk-order/identities/lanyards

Mahal sikit

Lanyards Supplier Malaysia - Lanyards.com.my

TIER 1 and 2 water shedding

	Tier 1 action plan (incoming flow < 650 m3/hr)	Impact	Action by	Status
1	Stop FW usage (including FW training) unless for Emergency	No impact	RSM	
2	RO-EDI running- Both RO-EDI shutdown	Demin inventory	UTY	
3	Minimize Cooling water Continuous blowdown rate, To reduce HRSG blowdown depend on Boiler water quality.	No impact	UTY	2-3 m3/hr saving depend on Boiler and cooling water quality
4	Prolong Demin train A/B/C/D throughput Train A- 2200 m3/hr Train B- 2200 m3/hr Train C- 3400 m3/hr Train D- 2200 m3/hr	No impact	UTY	8 m3/hr saving
5	Extend backwash timer for PSR-1, COGEN and MG3 SSF	No impact	UTY	1 m3/hr saving
6	Reduce steam venting by turbine to motor switching where applicable within Area 5 1. PT-53202C-PM-53202A (HP-MP 30 tonne/hr)-Done 2. P-5341C-PM-5341A (HP-LP 18 t/hr) 3. K-54201C-K-54201A (HP-MP 20 t/hr)- Not recommended due to K-54501 frequent trip 4. K5401A-K-5401B (MP-LP 15 t/hr)- Not Available 5. P-51206C-P-51206B (HP-MP 17 t/hr)-Done 6. P-5105B-P-5105A (MP-LP 10 t/hr)-Done 7. P-51202B-P-51202A (MP-LP 6.5 t/hr) 8. P-5304C-P-5304A (MP-LP 12.5 t/hr) 9. P-53501A- P-53501C (HP-MP 12 t/hr)- Done	Motor running mode, no Auto standby	UTY	62 tonne/hr potential saving
7	ETS rental water recover to Utility water header	No impact	UTY	Subject to ETS water rental spec
	Tier 2 action plan (City water level inventory <60%)	**Impact**	**Action by**	**Status**
1	Reduce steam venting and letdown by turbine to motor switching where applicable – Process Area P-23206A- 6.3 tonne/hr (MP-LP) P-30243A- 15 tonne/hr (MP-LP) PT-21255B- HP-LP 8 t/h	No Motor cut in	OPR	Not implemented yet
2	Stop cold condensate intake to desalter 21LY006A V-21202 (8 m3/hr)- Offline	No impact	OPR	8 m3/hr cold condensate saving
3	Reduce ejector steam consumption VDU J-21252/3/4 (1 t/h)- Offline	No impact		1 t/hr saving
4	Close all process unit service water battery limit valve except for quenching water	No water supply to process unit	OPR	Not implemented yet

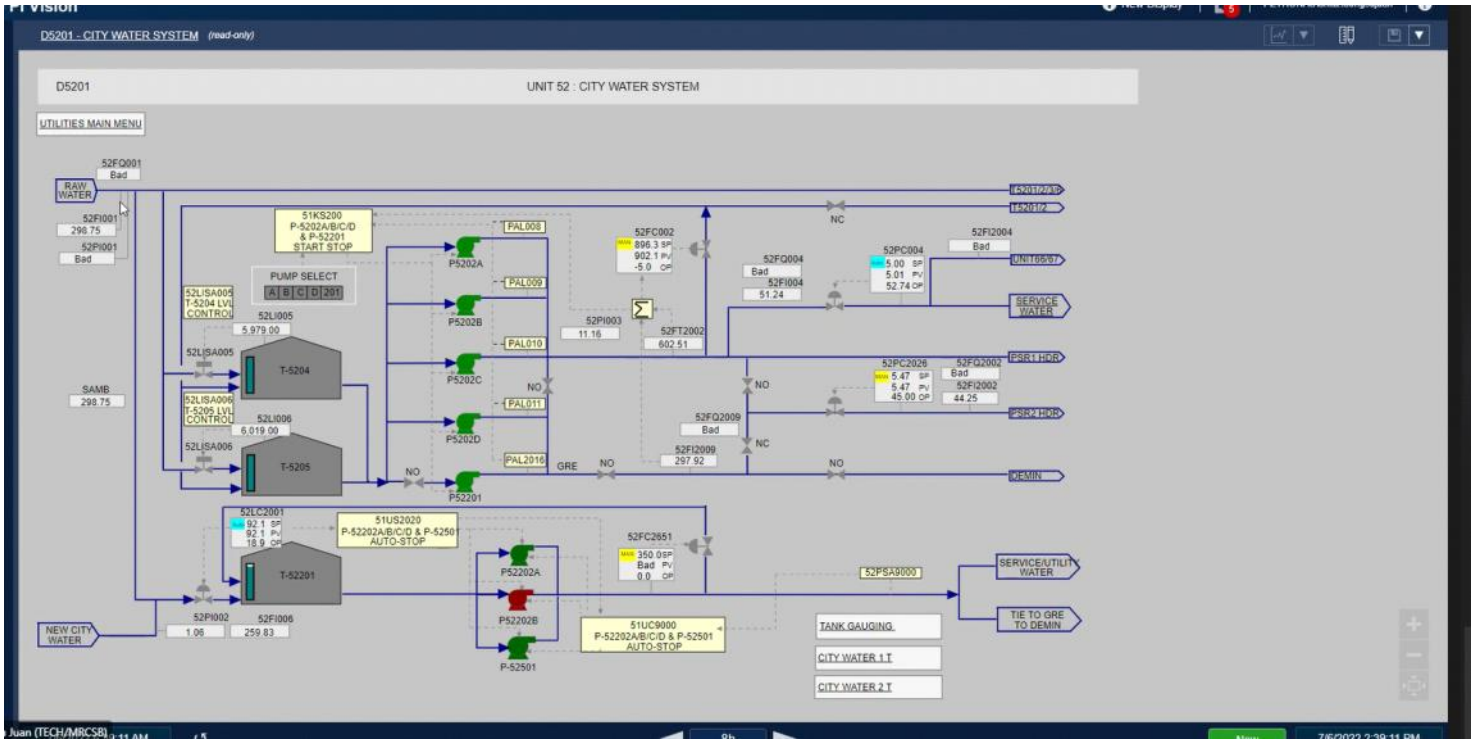
Usually trigger by Operation Engineer.
The rate is depending on the incoming flow.

TIER 3 and 4 water shedding

	Tier 3 action plan (City water level inventory <30%)	Impact	Action by	Status
1	STG shutdown	Power import/steam venting	UTY	130-150 m3/hr saving from cooling water make up and steam usage reduction
3	Transfer Fire water to city water tank(T5204/T5205/T52201) until fire water tank (T5201/T5202) level reach 12 m	Fire water level low	UTY	Fire water hose prepared
4	Shutdown 2 demin train (train A and D) subject to steam demand and demin inventory	Lower demin inventory	UTY	Depend on total steam demand
5	Top up T-5201 by POND 2 water and isolate suction/ discharge tank (Raise temporary CAF and SCE)	City water tank contaminate	UTY	Not implemented yet
	Tier 4 action plan (Tier 3 action item completed)	**Impact**	**Action by**	**Status**
1	Plant running at minimum/partial shutdown	Plant shutdown		Not implemented yet

Fire water normally at 17m. The low target sampai 14m

Manpower limitation. Tak dapat buat all action plan here.



[Open]

Study Background

Water Supply Infrastructure to MRCSB

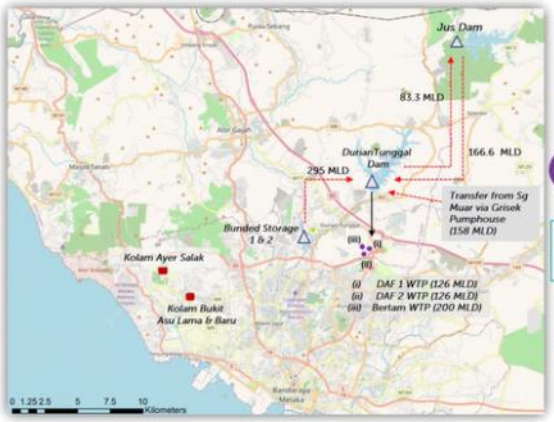


Figure 5: Proximity of water supply infrastructure to MRCSB

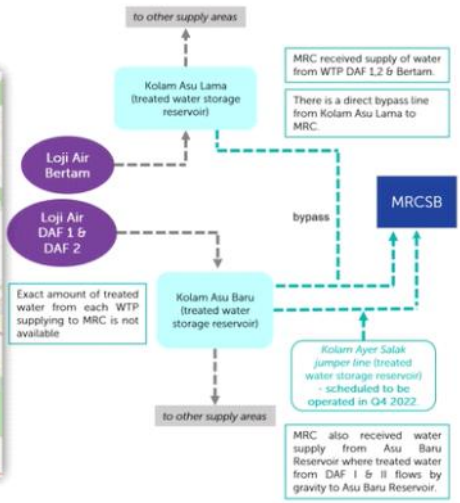


Figure 6: Water treatment plants configuration to MRCSB

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Internal

APC C402 Commissioning

Monday, June 10, 2024 10:05 AM

Plan for commissioning:

Minggu 14th July : Sementara buat step test EMICON
Minggu 23th June: Tak possible sebab takde orang

Plant load naik turun,tapi FC503 tak ubah. Panel kena adjust sendiri. -done Logic auto calculati

IQ guna gateway,Source guna application file
Guna nama common

Source: IQAPC
IOTAG: /Inferential/C2BOTTOMV1/Prediction/BPR

AC402 dan IQ- option to turn ON.

Logic -to avoid turn ON 2-2 CV…bila ON dua dua,turn OFF IQ.

Update dalam controller utk IQ. -done

Commissioning procedure - tambah commissioning log dan update model.

FC503 at high? So how to trigger panel..to esnure bumpless and current SV at the design FC503

Review current MV setting before commissioning. (APC Procedure)

Benefit
Baseline2
PTR 1

EMICON & EQA

Tuesday, November 19, 2024 2:18 PM

1) Fuel gas offset compared to actual. To implement bias for the simulation
2) The actual lab got some H2 composition.Maybe this

29/11/24

1)want to know the air/fuel ratio to validate..what is the lowest ratio possible.

What to share:
1) Equation for combustion - ch4
2) To check excess O2 vs air fuel ratio. Check the gain O2 to airfuel ratio too.
3) 10% of excesss air,equivalent to 2.1 excess o2
4) Propose excess o2 at 1.8 and find the air fuel ratio..let say 1.7..so use this number as reference for the actual condition to be 1.7..compare with actual data.check the factor that can match this.
5) Equation - from DCS
6) Compo - time & date -to generate the table.

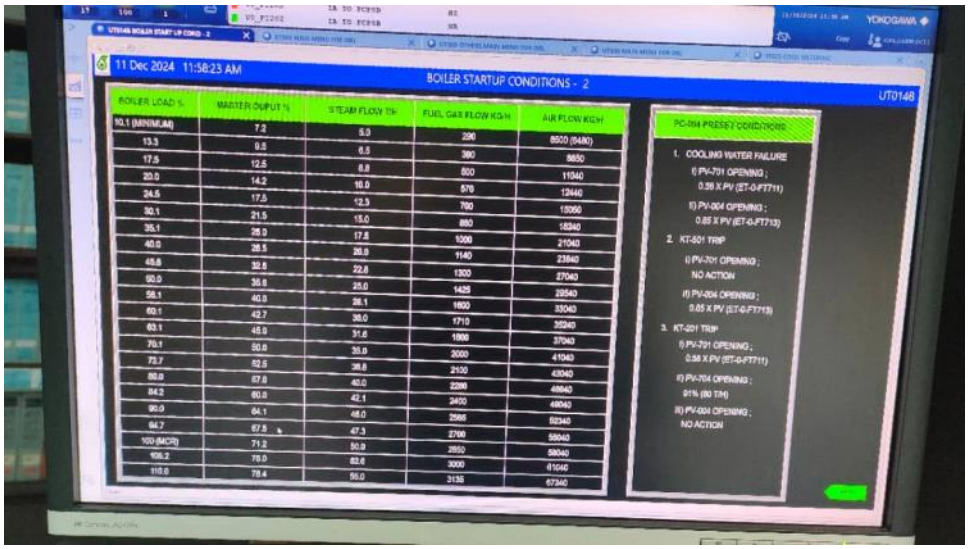
Monday::

Presentation:

<u>11/12/2024</u>

1) Check with Zaheera if 51_AI200A-- if okay or not?
2) Fuel gas from IBL AC302 - can check.
3) Check TI050B why the reading is lower

Note:
If Hydrogen more, less fuel gas is required.
Focus on boiler efficiency. Stack temperature represent the efficiency. More air carry the heat away from heating the steam,but goes to stack (efficiency convert to RM)
Check on motor current - (electrical convert to RM--scope 2)



From <https://teams.microsoft.com/v2/>

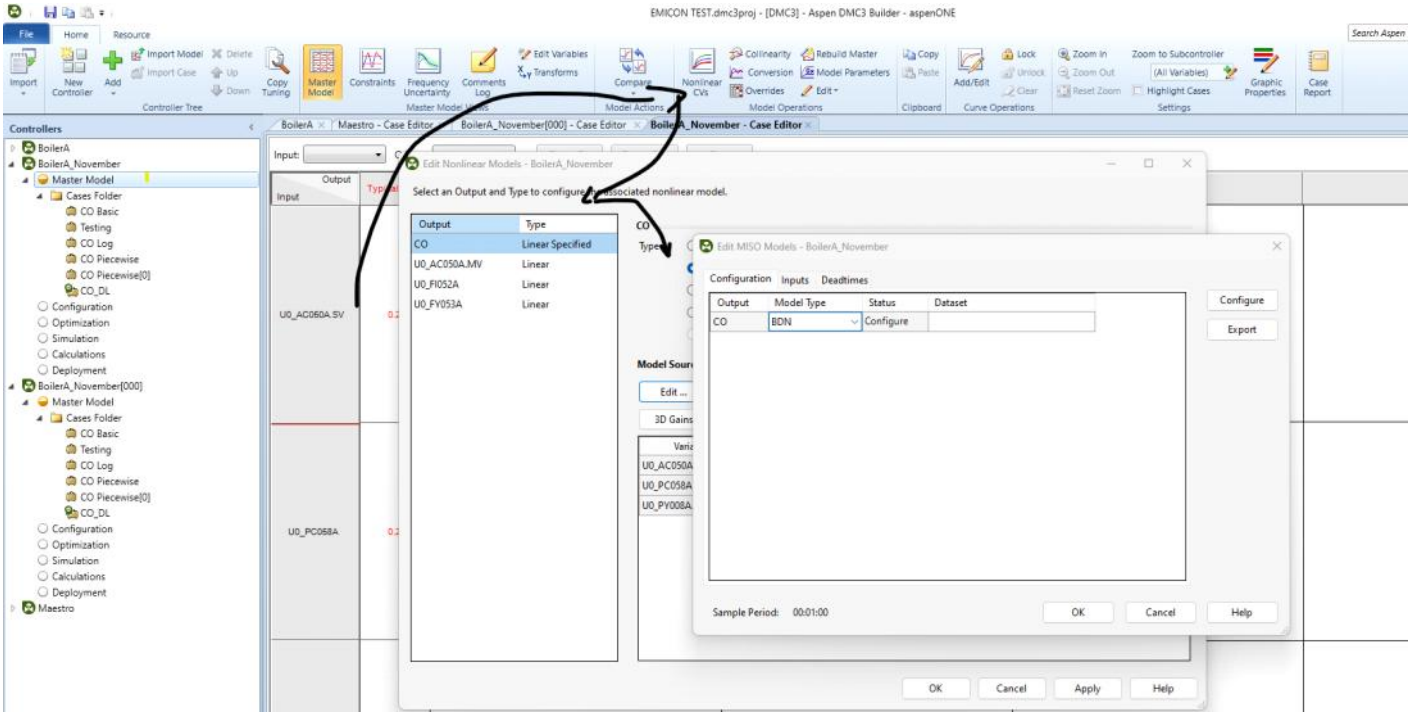
Amin to consult TP Instrument

PCEPE APC Modelling Tips and Trick

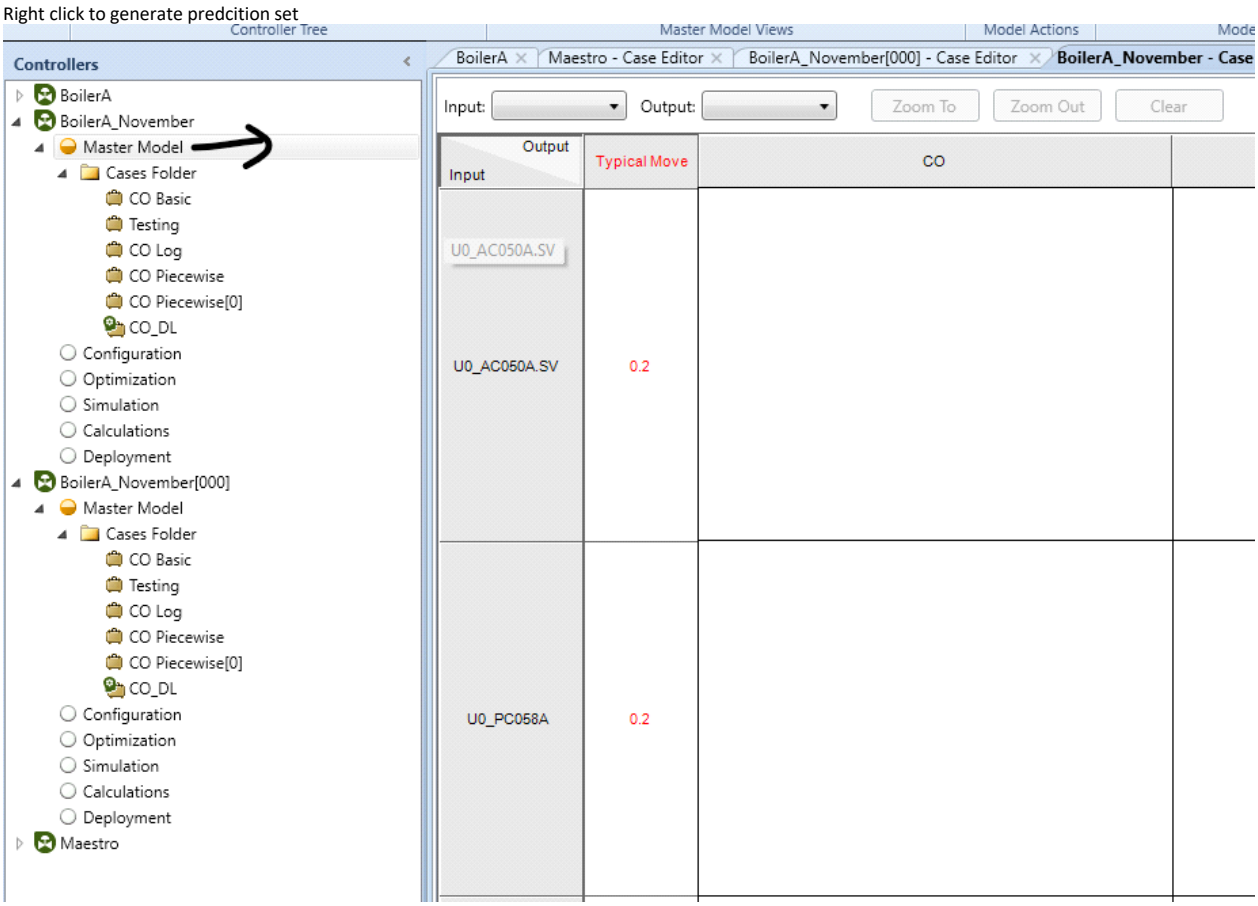
Monday, January 20, 2025 9:21 AM

BDN

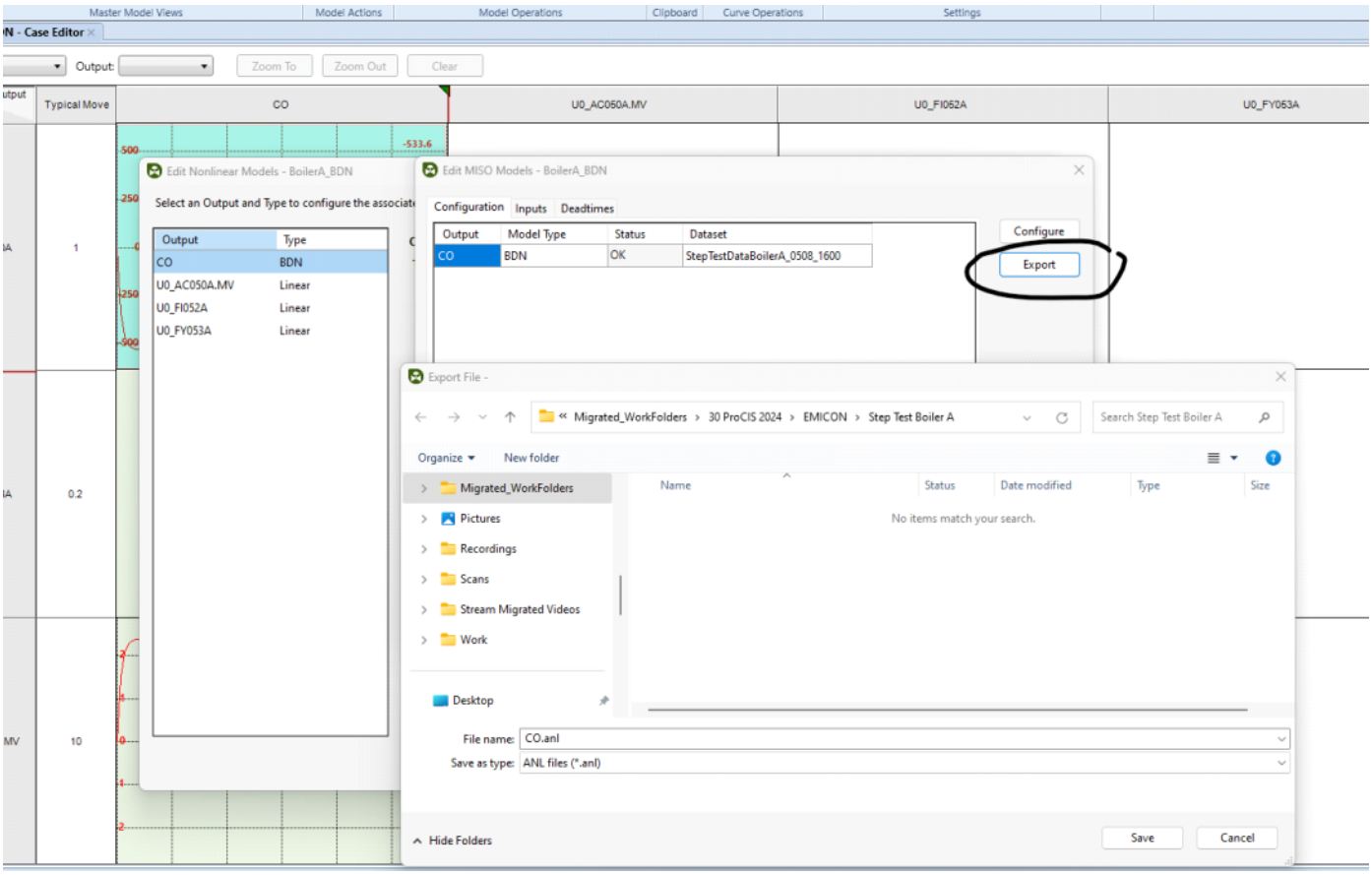
Edit from Master > Non Linear CV>Edit BDN>Choose Dataset



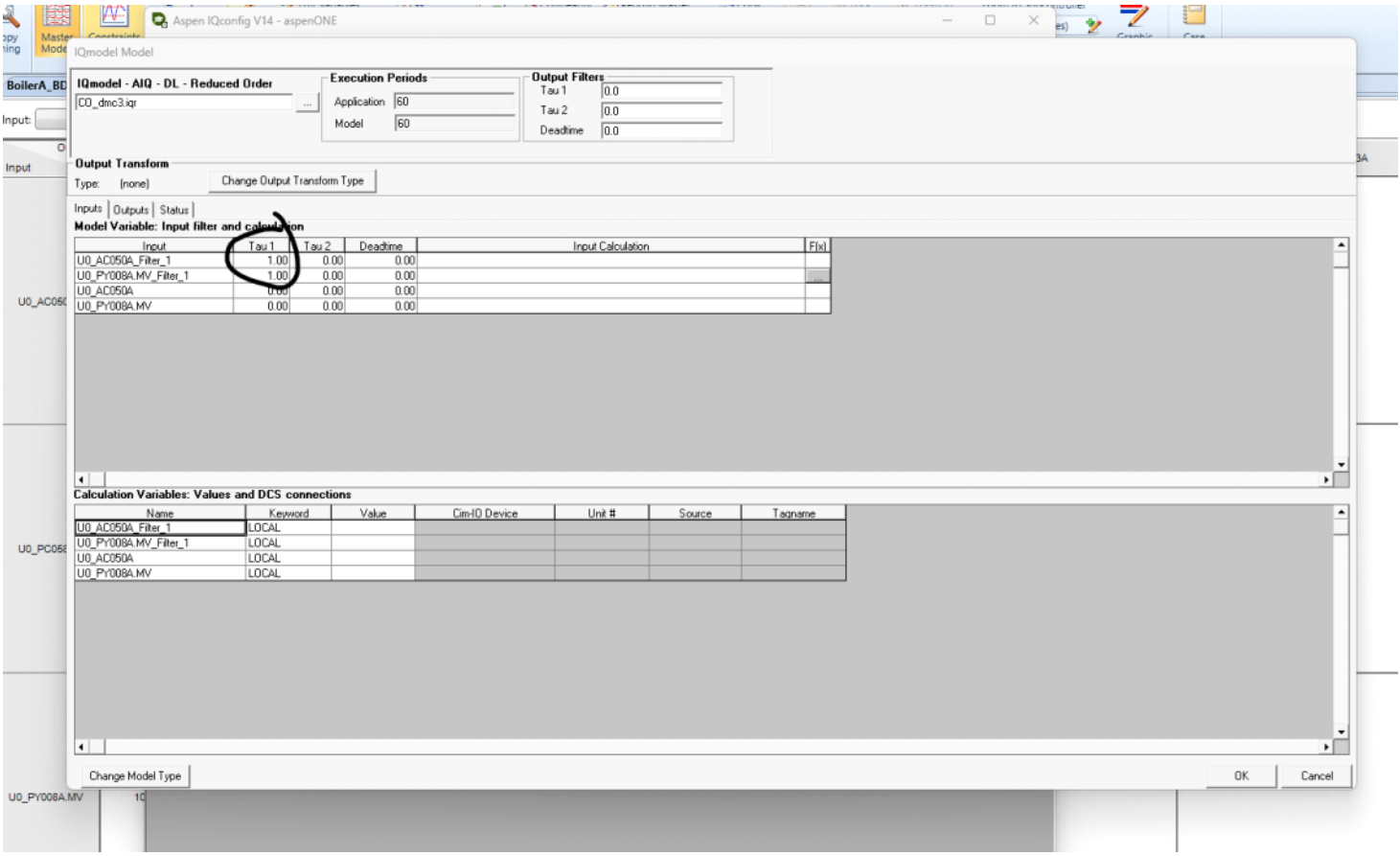
Right click to generate predcition set

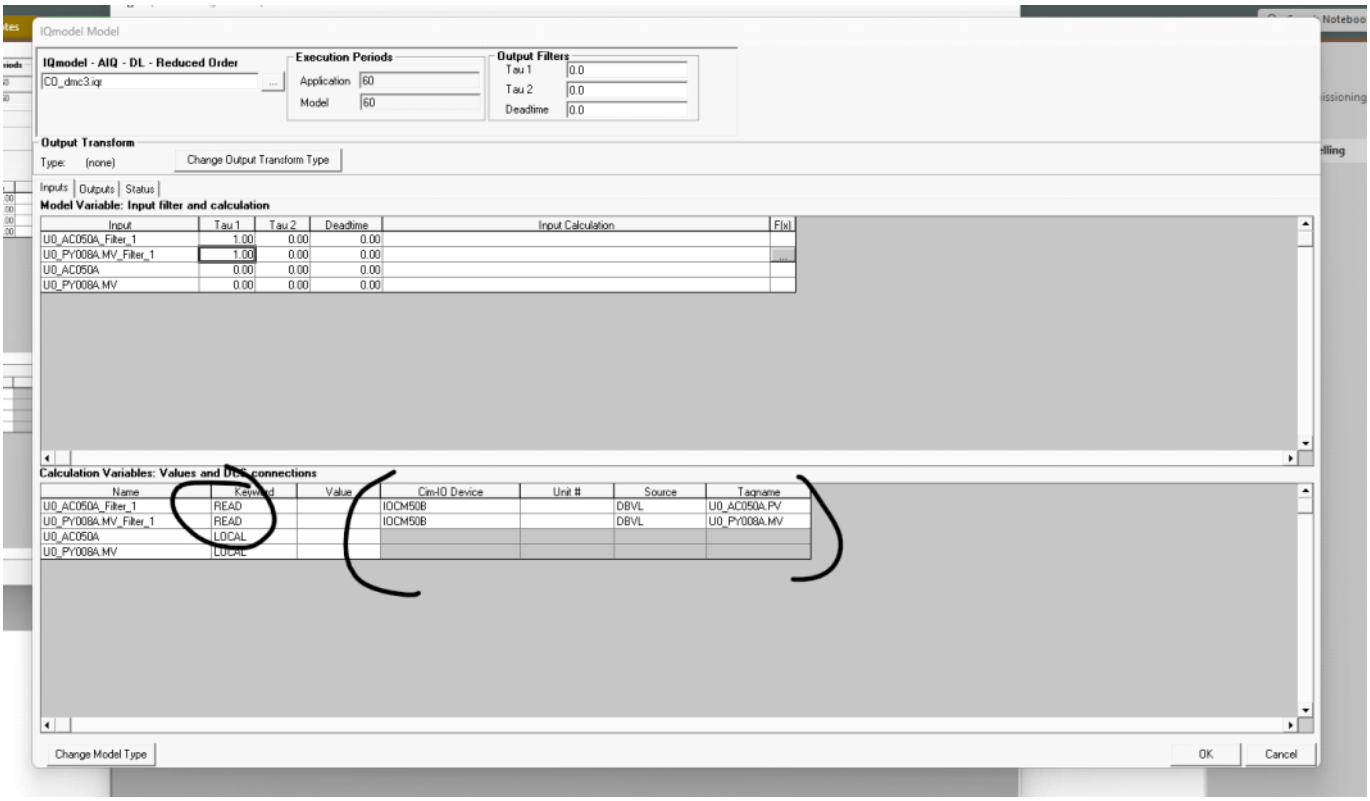


Export the BDN for IQR.mdl >non linear CV>edit>export



Import in IQConfig. Specify time constant used in BDN





Configure:
LXMAXHOURS
LAB BIAS FRACTION : 0.75 is the default
LOW HIGH LIMIT

APC Configuration

CV Weigh = 1/ECE . Letak 1+10^6 if don't want in control

- ECE in engineering unit. Easier to put engineering judgment. For 1 CV only. To adjust slow and fast,can adjust the Dynamic Target Concern.
- Move Suppression will change and effect all the CVs
- SS ECE when more than 1 CV at same rank. No meaning if different rank.
- Dynamic ECE to change the dynamic, how fast slow the violation.

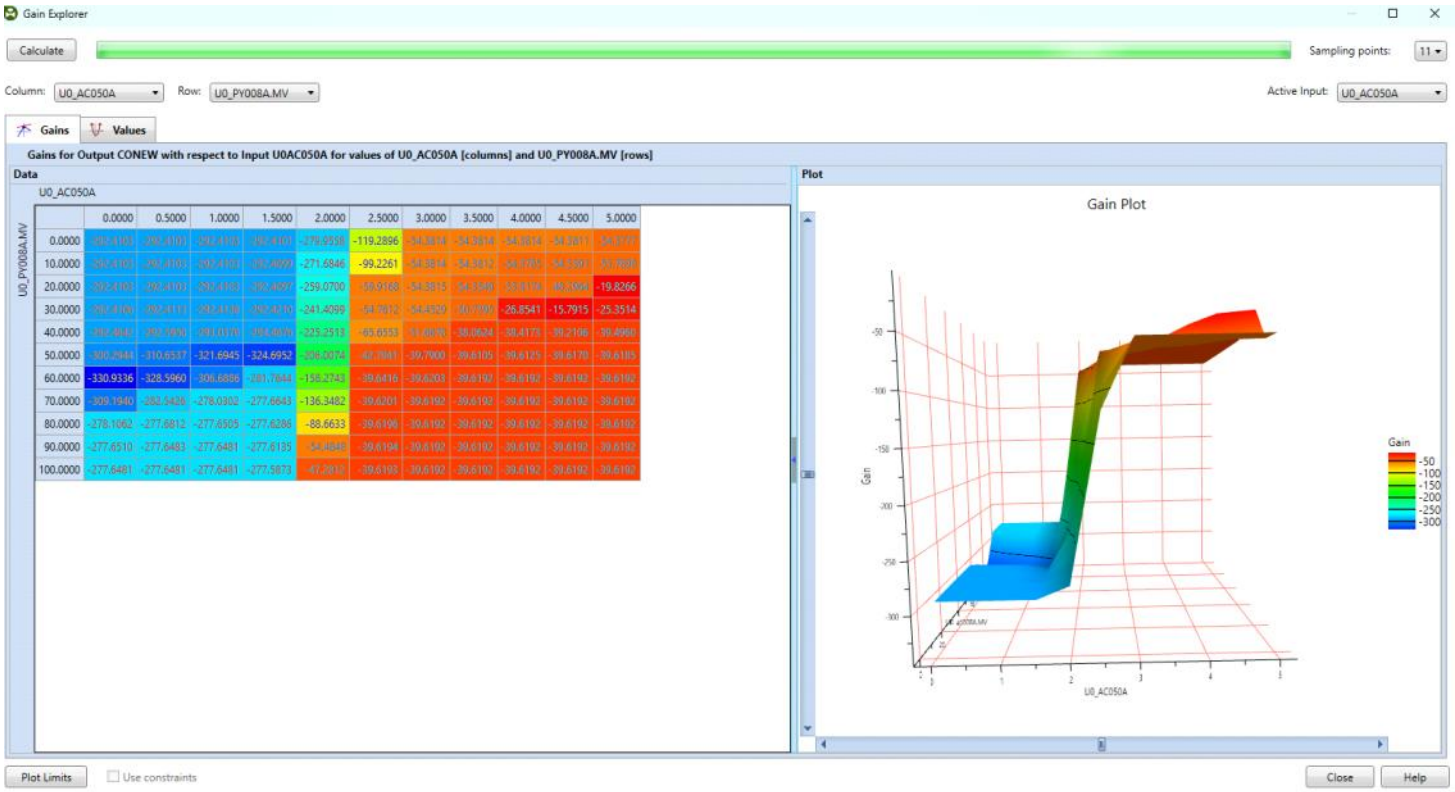
To revise the clamp target for exceess o2 controller. To create logic for aws wind up

<u>Pred Error</u>
-Full Feedback
-First Order. To configure Filter lag. Smaller the number the higher the filtrering. Filtre Horizon time only for moving average. This for cyclical reading

Logic:
If CO goes bad, turn off controller. If not, excess o2 will minimze sampai another cv hit ---covered under "**critical**" flag. Turn ON Critical flag in CV configuration

PEMS Model Review

11 June 2025 09:46



Comparable (AC050A - -81.35 , PY008A - -0.3988

U0_AC050A

U0_PY008A.MV	0.0000	0.5000	1.0000	1.5000	2.0000	2.5000	3.0000	3.5000	4.0000	4.5000	5.0000
0.0000	2.2677	2.2677	2.2677	2.2677	2.2995	2.7161	3.2034	3.2034	3.2034	3.2034	3.2037
10.0000	2.2677	2.2677	2.2677	2.2677	2.3206	2.8667	3.2034	3.2034	3.2036	3.2074	3.2603
20.0000	2.2677	2.2677	2.2677	2.2677	2.3527	3.1617	3.2030	3.2049	3.2445	3.7784	6.4970
30.0000	2.2676	2.2675	2.2669	2.2652	2.3894	3.1743	3.1410	3.3699	5.2820	5.4111	3.1357
40.0000	2.2543	2.2267	2.1333	1.8290	1.1468	0.3209	0.3286	0.7717	0.3858	0.1952	0.1334
50.0000	0.4893	-1.8948	-4.0508	-5.0808	-3.0360	-0.8772	-0.0139	-0.0043	-0.0087	-0.0078	-0.0081
60.0000	-6.4778	-6.3208	-4.2260	-1.8260	-1.1537	-0.4966	-0.4948	-0.4947	-0.4947	-0.4947	-0.4948
70.0000	-4.5147	-1.9418	-1.5062	-1.4720	-1.0902	-0.5337	-0.5337	-0.5337	-0.5337	-0.5337	-0.5337
80.0000	-1.5142	-1.4732	-1.4702	-1.4699	-0.7967	-0.5343	-0.5343	-0.5343	-0.5343	-0.5343	-0.5343
90.0000	-1.4703	-1.4700	-1.4700	-1.4699	-0.5852	-0.5343	-0.5343	-0.5343	-0.5343	-0.5343	-0.5343
100.0000	-1.4700	-1.4700	-1.4700	-1.4698	-0.5343	-0.5343	-0.5343	-0.5343	-0.5343	-0.5343	-0.5343

CEMS IWG

04 February 2026 09:58

Opening Speech: VR Harindren

1. In PIC , there are 22 stacks. Most of them are using CEMS

Speech by En Nazman,
GM, Engineering MLNG
Champion of CEMS WG

Early of 2025, CEMS IWG Reignite.
4th quarter meeting

ENVEW,Siemen Ultramat

Meeting CPOC

09 February 2026 09:14

Question to ask:

1. Device/Laptop boleh connected to internet tak? Nak tengok PI ,email - connect me, dan juga cpoc gas wifi
2. Boot high cut ke tak kisah? Apa PPE yang perlu
3. Logistic arrangement. Naik dari mana,etc2.
4. PTW semua camne -
5. EWS siapa perlu teman,support
6. Daily activity - pakai kasut
7. Biasa bawak beg apa? - luggage size, apa2 yg sesuai
8. Bawak deodorant roll on je. Power bank kena bagi
9. Bilik macam mana - 4 org /room

Strategy:
Kita focus pada MAN/PRD controller dulu

- Hotel Perdana - Van akan ambik org CPOC - Helibase (near airport). Checkin 615-630am. 40 min
- Chopper - Coverall PETRONAS. High Cut. Kasut sukan, no helmet-- PPE,helmet,boot google -