MCR92 流變儀使用說明

主要包括個人帳號建立,軟體操作,馬達校準,轉子校正,資料匯出及注意事項。大致流程 如下:

打開空壓機,溫度等附件,空壓機充氣完成後打開流變儀主機(如需馬達校準,需預熱儀器 一個小時)。

打開電腦桌面上軟體,首先需要註冊個人帳戶,每次測試都用自己帳號登錄,實驗資料管理 類似於資料庫模式,測試完成後登錄個人帳號匯出自己資料進行處理。

1. 開關機注意事項

- 開機前注意氣體壓力是足夠(超過 5 bar),若有水循環者,請確認循環系統內的水 量是否足夠
- 2. 若需更換控溫裝置,請按 switch off 鍵切換控溫裝置,(例如 P-ETD 更換為 C-PTD)
- 關機前請將夾具定位至最高,關閉主機操作面板上的 online 鍵,再按下 Ref 鍵即可 升至最高,並套上保護套避免氣動馬達遭受撞擊。
- 更換治具:此處以型號 CP50-1 做為示範 將套筒往上移動,把治具插入,並對齊上下刻線,再將套筒往下即可固定治具,儀器會 發出嗶聲,表示儀器感應到此治具及安裝成功







3. 更換控溫系統:此處以 P-ETD 跟 C-PTD 系統對換為示範

首先將儀器側邊的兩塊保護板卸下,左側是連接儀器的訊號線。右側為連接循環系統的管路。 接著將固定系統的三顆螺絲卸下,拔除左側的訊號線路,即可將系統由下往上抽離儀器,請 小心勿撞擊上方氣旋閥具。拿取欲使用之控溫系統,移除上蓋及旋鈕,放入插槽後連接訊號 線,固定螺絲加入上蓋及旋鈕即可(注意:固定用三顆螺絲不需鎖太緊,稍微固定即可)。





4. <u>例行性校正</u>

每日開機使用時務必要做一次,或是途中更換夾具,建議也要進行校正誤差。

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1.點選桌面操作軟體圖示,開啟流變儀程式

* App Manager		
	Control Panel - MCR92	
	Temperature (P-PTD200/AIR+H-PTD200): 23.90 °C Gap: - mm	MCR 92 SN82233112 Initialize 60.000 mm
RTFO AASHTO T315-12 TFO grading	SafeGap OK MS: <none> Call: B DTD200(AIR): LI DTD200 CNR22231742 82184025</none>	Moving profile: 2 Viscoelastic
Original Binder AASHTO T315-12	Cell: P-PTD200/AIR+H-PTD2003N02231/43-02104920 Temperature (P-PTD200/AIR+H-PTD200): °C P-PTD200/AIR+H-PTD200 MCR.92	Set value Switch

2.點選Initialize讓儀器初始化,此時馬達會預轉,注意請勿裝上任何夾具

3. drive 校正,點選 Measuring Set / Start service function / adjust drive inertia



4.此時請裝上欲使用之治具,並等待數秒後會由系統自動辨識,再按Set zero-gap做治具的歸零,歸零完治具會自動回到1mm的量測高度

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SafeGap OK		Moving profile: 2 Viscoelastic
MS: CP50-1 SN44884 Cell: P-PTD200/AIR SN82231743	3	
Temperature (P-PTD200/AIR):	°C	Set value Switch

5.治具的校正,點選 Adjust measuring system inertia

Current configuration: MCR92	Check Disconnect Start measuring set function *	Device: MCR 92 SN82233112	" Start service function "
Measu My Apps «	ring Set	Service	Device functions:
Recent Projects 8ITT-Osc-Rot-Osc DIN SPEC 91143-21 Motor Adjust 19 Motor Adjust 18 Motor Adjust 17 8ITT-Rot-Rot-Stop-Rot 5 Table 5	My Apps	÷.	Adjust measuring system inertia Rogium adar Download firmware Service report (clipboard) Service report (clipboard) Service report (e-mail) Set P1100 input offset and span Set user-defined start angle
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	RTFO AASHTO T315-12	PAV AASHTO T315-12	Original Binder AASHTO T315-12
	Asphalt binder verification AASHTO T350-14 0.1/3.2kPa	Asphalt PAV verification	Asphalt RTFO verification

6.馬達校正,點選 Adjust motor



7. 選項打勾,並點選 continue



8.馬達校正時間約3分鐘內完成,結束後點選Set to default / Close

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sphalt binder grading	Asphalt PAV	Rh Adjust upper moto	or for 'CP50-1 SN44884' r motor in order to compensate residual	friction	
AASHTO T315-12		Adjustment type:	Default adjustment	• 0	Start adjustment
sphalt binder verification	Asphalt PAV	Estimated duration:	approximately 3 minutes		Abort
AASHTO T350-14 0.1/3.2kPa		Elapsed time:	00:02:26 Adjustment finished successfully		
sphalt MSCR AASHTO	1			2	
	<	Set to default			Close

9.Air Check,點選 My Apps / Verification & Adjustment

	Asphalt binder verification	Asphalt PAV verification	Asphalt RTFO verification
	AASHTO T350-14 0.1/3.2kPa Asphalt MSCR AASHTO		
1 My Apps		94	
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10. 點選 Motor adjustment(CP/PP/DG/PP/ST),MCR9X

11. 輸入檔名後點選 Start,開始進行 Air check 校正

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12. 得到 Air check 校正結果,若是灰色的線,超過綠色與藍色線的範圍,表示氣體與 氣動馬達未達到良好狀態,須進行馬達校正後再進行 Air check



13.接著按下方的 Continue 鍵,完成 Air check 儲存並離開

