Ministat® 240-cc®-NR

Ministat® 240-cc®-NR controlling Radleys 10 litre reactor

Requirement
This case study demonstrates the closeness of the temperature control and the minimum process temperature achievable in the process mass.

Method
The 10 litre Radleys reactor was connected to the Ministat 240-cc-NR using two M24x1.5 1-meter flexible hoses. The thermofluid used in the system was M40.165.10. "Process" control was carried out via a Pt100 sensor located in the process mass. Stirrer speed was set to 160 rpm.

Setup details

Temperature range:	-45°C...+200°C
Cooling power:	0.60 kW @ +20°C
	0.55 kW @ 0°C
	0.35 kW @ -20°C
	0.125 kW @ -30°C
Heating power:	2.0 kW
Hoses:	M24x1.5; 2* 1 m
Thermofluid:	M40.165.10
Reactor:	Radleys 10 litre reactor
Reactor content:	8 litre P20.275.50
Stirrer speed:	160 rpm
Control:	process

Results

This case study demonstrate the temperature control possibilities of the Ministat 240-cc-NR in combination with the Radleys reactor. Once stable at +20°C under "Process" control, a set-point of -10°C is entered. The Ministat cools the reactor down to the new set-point in approximately 85 minutes. In the next step a rapid heat-up time of less than 40 minutes from -10°C to +20°C can be seen. The temperature controller stabilize the process temperature fast and accurate.