(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 December 2001 (06.12.2001)

PCT

(10) International Publication Number
WO 01/92865 A1

(51) International Patent Classification[7]: G01N 27/16, 25/22, G05D 23/20, G01P 5/12

(21) International Application Number: PCT/AU01/00601

(22) International Filing Date: 23 May 2001 (23.05.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PR 0159 2 June 2000 (02.06.2000) AU
PR 4319 10 April 2001 (10.04.2001) AU

(71) Applicant *(for all designated States except US)*: **AUSTECH INSTRUMENTS PTY LTD** [AU/AU]; 8 Ponderosa Parade, Warriewood, New South Wales 2102 (AU).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **SONDERGAARD, Lars** [AU/AU]; 8 Ponderosa Parade, Warriewood, New South Wales 2102 (AU).

(74) Agent: **GRIFFITH HACK**; GPO Box 4164, Sydney, New South Wales 2001 (AU).

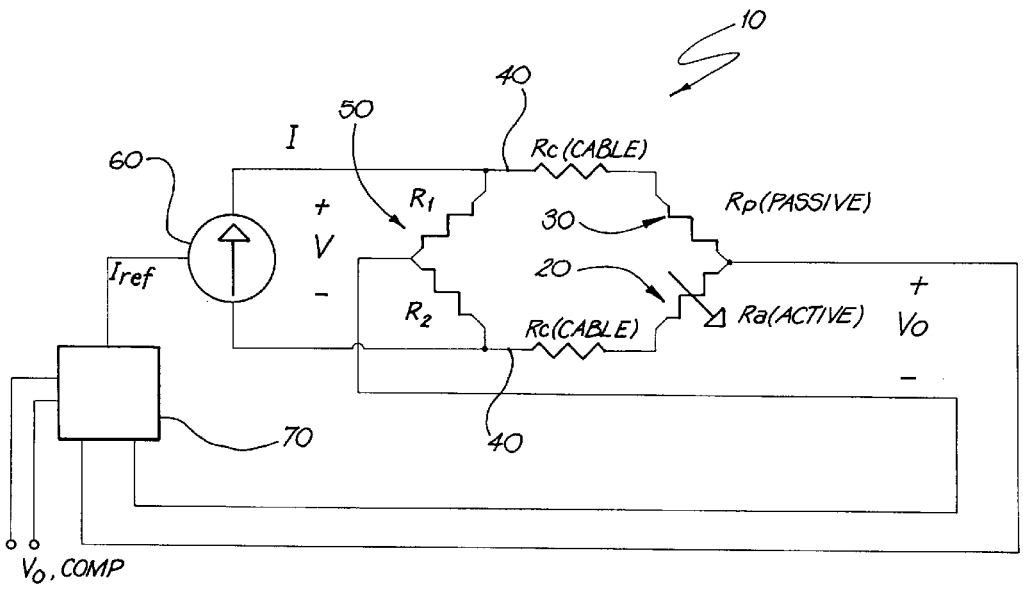
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A FILAMENT CONTROLLER



(57) Abstract: A control device (70) is disclosed for controlling a power supply (10) arranged to supply electrical power to a filament (Ra), the temperature of the filament (Ra) being non-linearly dependent on power supplied to the filament (Ra). The control device (70) is arranged to receive temperature control instructions and to control the power supply (60) such that the temperature of the filament (Ra) is controlled in accordance with the instructions. The control device (70) is also arranged to take into account the non-linear relationship between the filament temperature and power input into the filament (Ra) so as to control the filament temperature in accordance with the instructions. The temperature control instructions are a function of a detected change in filament temperature and the control device (70) controls the temperature of the filament (Ra) such that the life of the filament is prolonged.

WO 01/92865 A1