polyaniline: corrosion potential shift and morphological changes. Advanced Materials, 1994; 6: 226～228

23 Kinlen P J, Silverman D C, Jeffreys C R. Corrosion protection using polyaniline coating formulations. Synthetic Metals, 1997; 85: 1 327～1 332

24 Deng Z, Smyrl W H, White H S. Stabilization of metal-metal oxide surfaces using electroactive polymer films. Journal of the Electrochemical Society, 1989; 136: 2 152～2 157

25 Jain F C, Rosato J J et al. Formation of an active elective barrier at Al/ semiconductor interface: a novel approach in corrosion prevention. Corrosion, 1986; 42: 700～707

26 Marcin A M, Mariusz T G et al. Evaluation of polyaniline films containing traces of dispersed platinum for protection of stainless steel against corrosion. Electrochimica Acta, 1999; 44: 2 157～2 163

27 Li P, Tan T, Lee J Y. Corrosion protection of mild steel by electroactive polyaniline coatings. Synthetic Metals, 1997; 88: 237～242

28 Posdorfer J, Wessling B. Corrosion protection by the organic metal polyaniline: results of immersion, Volta potential and impedance studies. Fresenius' Journal of Analytical Chemistry, 2000; 367: 343～345

29 Wrobleski D A, Benicewicz B C. Stabilization of polyaniline solutions. Polymer Preprints, 1994; 35: 267～268

30 Wrobleski D A, Benecewicz B C, Thompson K G et al. Corrosion resistant coatings from conducting polyaniline. Polymer Preprints, 1994; 35: 265～266

31 Yasuda H, Yu Q S, Chen M. Interfacial factors in corrosion protection: an EIS study of model systems. Progress in organic coatings, 2001; 41: 273～279

32 Zipperling Kessler & Co. Web site (www. Zipperling. de)

33 GeoTech Chemical Co. Web site (www. Catize. com)

34 Wang X H, Li J, Zhang J Y et al. Polyaniline as marine antifouling and corrosion-prevention agent. Synthetic Metals, 1999; 102: 1 377～1 380

35 **孙祖信, 彭志强. 导电高分子材料聚苯胺及其开发前景. 材料开发与应用**, 1995; 10(1): 20～22

(**编辑　任涛**)

架空电力线路爆炸压接技术

本成果利用爆炸作用原理和金属爆炸加工理论,专门研制出用于爆接电力线接头的爆炸压接装置(爆压弹)。电力工人只要将导线插入弹内并引爆,便获得高质量的线路接头。本成果适合专业化生产,简化操作程序,提高施工效率,减轻劳动强度,提高电力线接头连接质量。

该成果将军工技术应用于民品,研制出多种型号数十种规格的结构设计,形成常用系列。

接头压接质量达到"爆炸压接施工工艺规程"的各项指标。接头拉断力不低于本体强度的 95 %,接头电阻不高于长导线的电阻,疲劳振动 3 000 万次无损坏,接头表面光滑平直,钢股、铝股均无损坏。本技术国内首创,水平先进。

在高压、超高压输电工程建设中,架空电力线连接质量是关系全部线路运行安全的关键之一。以 33 万伏线路为例,平均每百公里有接头约 2 000 个,每个接头都涉及输电线路,影响整个供电电网的安全。本成果解决了电力建设中一个较大的技术难题,对提高输电线路质量,确保城市或工业区长期、安全、稳定的电力供应具有重要意义。经济、社会效益显著。

·李连清·