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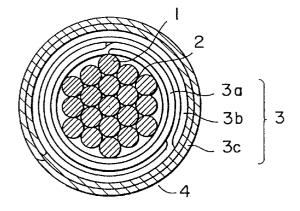
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- (54) Multi-layered insulated wire for high frequency transformer winding.
- A bundled conductor manufactured by bundling a plurality of small diameter conductors 1, or a bundled conductor 2 manufactured by giving an extremely rough twisting pitch, which is 20 times or more larger than an outer diameter of said bundled conductor, to the bundled conductor is formed. Then, an insulating layer 3 comprising 3 layers 3a, 3b and 3c, each comprising a heat-resistant plastic film, is arranged around the bundled conductor above. A required voltage resistance characteristics is provided and maintained by any 2 of the aforesaid 3 insulating layers, and each of the 3 insulating layers described above is independent respectively and can be separated from other ones.

The multi-layered insulated wire constructed as described above is available as an insulated electric wire for a winding to be used in a transformer which satisfies various requirements for safety such as IEC and UL, and with this multi-layered insulated wire it is possible to suppress heat emission in a high frequency switching transformer.

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EUROPEAN SEARCH REPORT

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ategory	Citation of document with i of relevant pa	ndication, where appropriate, ussages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
	GB-A-2 230 208 (SAM October 1990 * page 6, line 17 -	IKEN ELECTRIC CO LTD) 17 - line 21 *	1	H01F27/32 H01B7/02
	1988	LISLE CORP) 2 March	1	
	GB-A-1 237 173 (PIR AZIONI) 30 June 197	EELLI SOCIETA PER		
				TECHNICAL FIELDS SEARCHED (Int.Cl.5) H01F H01B
	The present search report has be			-
	THE HAGUE	Date of completion of the search	11_ = 1	Examiner
X : partidocus A : techn	ATEGORY OF CITED DOCUMEN cularly relevant if taken alone cularly relevant if combined with ano ment of the same category nological background written disclosure	E: earlier patent docu after the filing date	underlying the ment, but publise the application other reasons	shed on, or