

TDG Corp

Haining City

People's Republic of China



TDG Corporation



- World's Largest Ferrite Manufacturer
- MnZn and NiZn Production
- Only Ferrite Company on Shanghai Stock Exchange
- Distributed in North America by MH&W International



Introduction

- Founded 1984
- Renamed 1992 as Zhejiang Tiantong Electronics, Co., Ltd
- Public Offering 1999 Shanghai Stock Exchange
- Additional Offering 2002
- 3rd Offering 2005



Serves Entire Ferrite Industry



TDG Major Customers

- USA – China
 - Astec – Pulse – Midcom - CoEv
- Europe – China
 - Alcatel – Kaschke – Epcos – Eldor
 - Phillips - Vogt
- Japan
 - FDK – Hitachi – Sony – Sumida
 - Tamura – Maco – Tokin - NEC
- Korea
 - Samsung - LG
- Taiwan
 - Acer/Dafon – Delta – LSE
 - UMEC – Skynet – Hipro – AC-Bel
- Local
 - Changhong – TCL - Skyworth

MnZn Production

- 2004 – 2,100 Tons per Month
- 2005 – 2,500 Tons per Month
- 2006 – 2,700 Tons per Month
- 2007 – 3,000 Tons per Month
- Capacity of over 200 Million core sets per month
- Largest Capacity in the World



Powder Preparation

Spray Dryers



Tooling



- Wire EDM
- TDG Produces their own Tooling
- Tooling Costs are \$800.00 - \$1,000.00

MnZn Press Room

Total 450 Presses



MnZn Sintering

Elevator and Tunnel Kiln



Finishing

Thru Feed and Polishing



TDG MnZn Ferrite Material

TDG	Frequency	Initial Permeability	TDK
TD5		5,500	DN50
TD5A		4,500	DN45
TD5B		4,000	Epcos N45
TD5W		4,500	DNW45
TF1		1,800	HV22
TF2		2,300	HV38
TF3		2,300	HV45
TH2	250KHz	2,300	DN40
TH10	250KHz	10,000	DN70
TP4	200KHz	2,300	PC40
TP4A	300KHz	2,400	PC44
TP4D	300KHz	2,500	PC47
TP4E	300KHz	1,700	PC33
TP4S	300KHz	2,000	Epcos N97
TP4W		3,000	PC95
TP5	1MHz	1,400	PC50
TP5A	1.5MHz	1,000	Mag Inc L
TS5		5,500	HS52
TS7		7,500	HS72
TS10		10,000	HS10/H5C2
TS10A		10,000	Epcos T38
TLD		12,000	H5C4
TS13		13,000	Epcos T42
TS15		15,000	H5C3

TDG Corp

R&D Technology



Batch kiln:

Used to study top
grade MnZn ferrite



Quantachrome instrument

Used to analyze the performance of powder particles



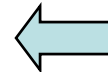
SY823-2 BH analyzer





TMA 2940 Thermomechanical Analyzer

**Used to study the parameter of heat expansion
MAX temperature is 1000°C.**

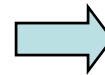


SDT2960 Simultaneous DSC-TGA

**Main use: Used to study the weight-lost process
because of heat. MAX temperature is 1500°C.**

Microcosmic structure Analyzer

**be used to observe microcosmic
structure of core, MAX multiple is 800X.**



NiZn

SMD Inductor
Ferrite Cores



Bobbin
Cores

Rods



Multi-hole
Cores

Toroids



EMI UU Cores



EMI Cable Shield

NiZn investment & capacity

Established at the beginning of 2002, TDG has invested more than \$7 Million in NiZn powder & production

The capacity of powder has attained:

2004 - 2000T/y

2005 – 3000T/y

Every month TDG produces more than 80 million pieces of NiZn cores



NiZn Division

The main production equipment

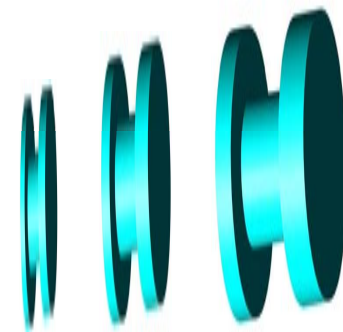
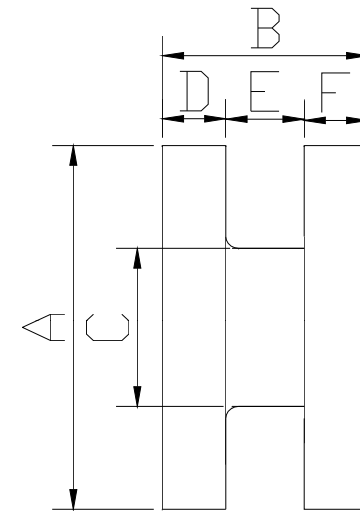
- The pressing machine: 62 sets , 5 imported from Japan ,18 from Taiwan
- Cutting machine: 41 sets all imported from Taiwan or Japan
- 6 Kilns



TDG Capabilities

The Super Thinner prod

Item	(mm)			
A	3.0	4.8	6.0	8.0
B	0.60	0.60	0.70	1.00
C	0.60	0.96	1.50	2.40
D、 F	0.17	0.17	0.20	0.35
E	0.26	0.26	0.26	0.30





Thank You!



Magnetics Technology Ahead Of The Rest

