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Natural Refrigerants

**07/06/18 - Johannesburg**





## **CO2 REFRIGERATION**

THE IN2FOOD INDUSTRIAL APPLICATION DECISION

## IN2FOOD GROUP (PTY) LTD

### THE BACKGROUND

- THE LARGEST SUPPLIER OF FRESH AND CHILLED FOOD PRODUCTS TO WOOLWORTHS;
- EXPORT CUT FRUIT AND AVOCADO PEAR TO MARKS & SPENCER AND BAKKAVOR UK DAILY;
- OVER 1000 PRODUCT LINES;
- OPERATIONS IN SOUTH AFRICA AND AUSTRALIA
- 11 SITES IN SOUTH AFRICA; 5 IN GAUTENG; 6 IN THE WESTERN CAPE;
- A TOTAL OF 14 FACTORIES;
- THE OLDEST AND LARGEST SITE IS IN BOKSBURG – 4 FACTORIES; REACHING CAPACITY;
- DECISION: BUILD A STATE-OF-THE-ART FOOD FACTORY ON A SEZ SITE;
- 3.3 HA; 17500 SQ.M FOOTPRINT; 22700 SQ.M GLA; THE LARGEST OF ITS KIND IN THE SOUTHERN HEMISPHERE

## **IN2FOOD GROUP (PTY) LTD**

### THE REQUIREMENTS

- IMPROVED TECHNICAL AND PROCESSING STANDARDS WITH 15000 SQ.M UNDER REFRIGERATION RANGING FROM 0 TO 8 DEGREES;
- CREATE FOOD STAGING OPPORTUNITIES BY INSTALLING A 500 PALLET FREEZER AT -18 DEGREES CELSIUS;
- BLAST FREEZING FROM AMBIENT TO -18 DEGREES CELSIUS;
- CHILLED WATER SUPPLY OF 20000 LITRES PER HOUR AT 4 DEGREES CELSIUS
- HEAT TRANSFER FACILITATING THE SUPPLY OF 18000 LITRES OF HOT WATER PER HOUR AT 55 TO 60 DEGREES CELSIUS;
- IMPROVED ENVIRONMENTAL STANDARDS THROUGH INSTALLING THE APPROPRIATE REFRIGERATION, SOLAR POWER AS WELL AS WATER SAVING AND RECYCLING MEASURES;
- A 5-STAR GREEN RATING – THE FIRST SA INDUSTRIAL COMPANY TO ACHIEVE THIS.

## IN2FOOD GROUP (PTY) LTD

### THE REFRIGERATION DEBATE

- **AMMONIA REFRIGERATION** WAS THE OBVIOUS CHOICE;
- INDUSTRY RECOMMENDED IT;
- HAD SUCCESSFULLY USED 4 INSTALLATIONS OVER 25 YEARS, 2 AT IN2FOOD;
- LONGEVITY AND RETURN ON INVESTMENT WAS VIRTUALLY ASSURED.
  
- **CO2 REFRIGERATION** WAS THE FAR LESS OBVIOUS CHOICE;
- SMALLER INDUSTRIAL AND MAINLY RETAIL APPLICATIONS;
- THE NUMBER OF SUPPLIERS / INSTALLERS WERE LIMITED;
- INDUSTRY SPOKE ONLY OF THE RISKS, WITH LITTLE OR NO BENEFIT.

## **IN2FOOD GROUP (PTY) LTD**

### THE CO2 REFRIGERATION DECISION

- THE STAY FACTOR;
- THE GREEN FACTOR;
- THE COST FACTOR – LOWER INITIAL INVESTMENT AND RUNNING COSTS, BETTER RETURN;
- ADDED BENEFITS – HUMIDITY CONTROL AND CONDENSATE WATER RECLAIM;
  
- IN2FOOD DECIDED TO PARTNER WITH:

## **COMMERCIAL REFRIGERATION SERVICES**

- INSTALLATION BEGINS AUGUST 2018 FOR COMPLETION JANUARY 2019

## IN2FOOD GROUP (PTY) LTD

### PROJECT PROGRESS

- PILING AND FOUNDATIONS STARTED IN LATE JANUARY 2018;
  - TOP STRUCTURE AND ROOF TO BE COMPLETED BY END JUNE;
  - ISO-PANELS FITTED IN JULY AND AUGUST;
  - REFRIGERATION INSTALLATION BEGINS AUGUST FOR COMPLETION NOVEMBER;
  - COMMISSIONING END NOVEMBER;
  - PRACTICAL PROJECT COMPLETION FEBRUARY 2019.
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- GREATEST CHALLENGE TO DATE:                      **CONSTRUCTION DELAYS!**

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Thank you for listening.

