11th ACA Annual Cashew Conference

ACA
AFRICAN CASHEW ALLIANCE

A NEW VISION FOR PARTNERSHIPS & INVESTMENTS

Cotonou, Benin
September 18-21, 2017

Knowledge sharing. Exposition. Field trips.

CNSL VALUE CHAIN

JC Reddy

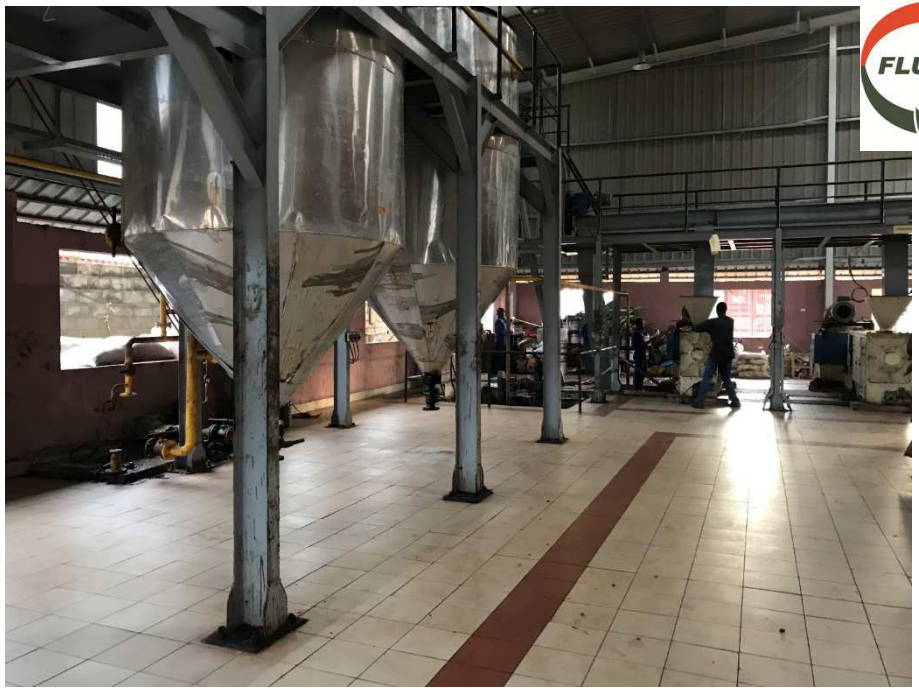
FLUDOR-BENIN S.A.

20 Sep 2017

CNSL VALUE CHAIN

FLUDOR BENIN - CNSL PLANT & TANK FORMS

CNSL VALUE CHAIN



CNSL Sump & batch Tanks

Auto shell feeder to CNSL Expellers

32TPD Shell crushing unit
Provision for Future Expansion loads
High safety design
Oil flow in closed circuit
One of the well maintained units in cashew world

CNSL VALUE CHAIN

CNSL Sump & batch Tanks

Shell Feeder & CNSL Expellers

Part of Integrated Mechanical Cashew Processing unit
Provision for CNSL Value chain extension
Supplies eco-friendly cashew shell DOC for local boilers
Supplies CNSL in Flexi tanks to global market

CNSL VALUE CHAIN

CASHEW SHELL CAKE

CASHEW SHELL CAKE

CNSL OIL

BIO-MASS BRIQUITTES

BIO-MASS CHIPS

FUTURE SCOPE

CNSL VALUE CHAIN

- Combustion

Direct Heat

- Gasification

Syngas

- Pyrolysis

Syngas

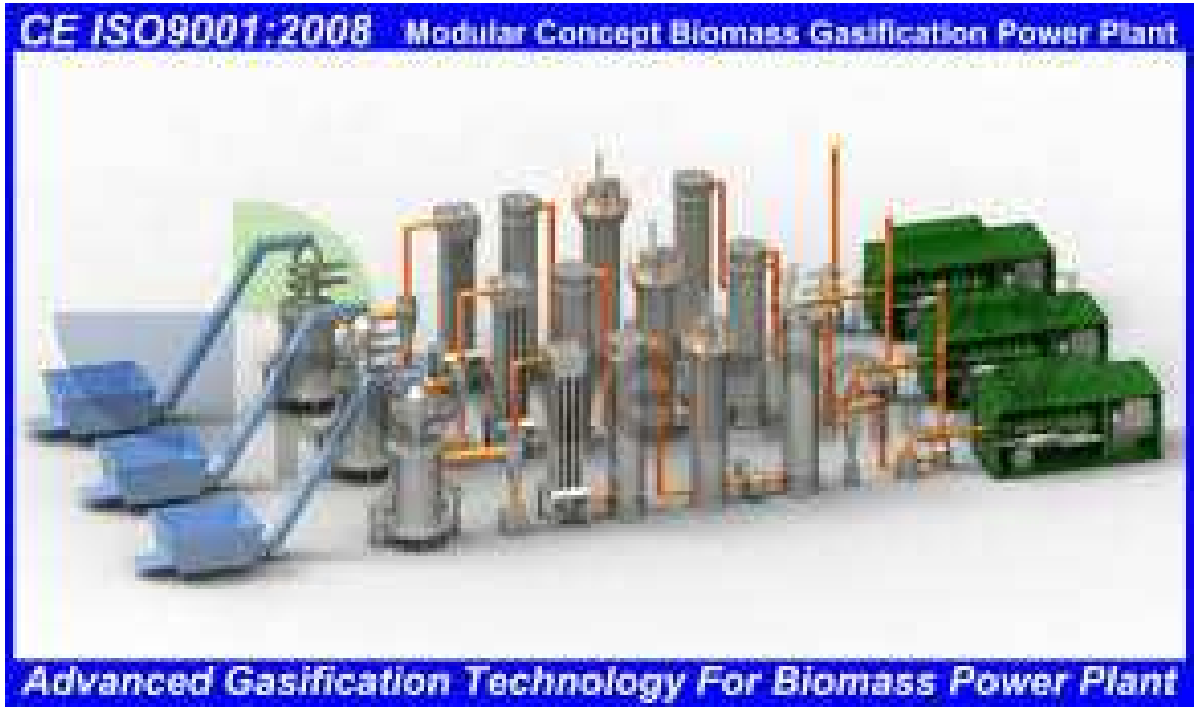
CNSL VALUE CHAIN

Challenges of by-product recovery from cashew agro-waste

1. Major challenge in African Cashew Process
2. Africa's major loss & Asia's gain (>$70PMT)
3. CNSL Plant is first step forward
4. De-oiled cake as safe agro fuel
5. Briquetting concept (+Cal-Value)
6. Gasifier for clean energy
7. Charcoal preparation
8. BEP is tough to reach at current status
9. Global oil prices also impacting the CNSL
10. Out-of-box thinking required to see it as Profit centre

CNSL VALUE CHAIN

SYNGAS GENERATION AS FUEL



 # Syngas/Producer Gas is the synthetic gas derived from **gasification and pyrolysis**
 # Syngas is volatile making it an ideal fuel source.
 # Syngas is made up of CO, and H2 (85%) with smaller amounts of CO2&Methane

 # Syngas has around 50% of the energy of natural gas
Syngas can be combusted to produce thermal energy (Steam&Power)
Syngas can be directly fired in Gasoline Engines / Gas turbines

CNSL VALUE CHAIN

Way-forward for African Cashew Processing Units to assess the following:

1. CNSL based paint unit
2. CNSL Resin unit
3. Captive Power Plant
4. Assessment of Cardanol unit
5. Charcoal generation
6. Vermicompost / Bio-fertilizer