

Identify the Difference and Salient features for Vertical Vibrated Casting Process Vis a Vis Spinning Process.

Central Core Vibration

- Homogeneous compaction
- Uniform material distribution
- Uniform crushing strength at jacking surfaces
- Uniform concrete at surface – no cosmetic cracking
- No leakage and resulting stony surface areas
- Spigot receives efficient dry cast pressing & compaction

Spun Pipes

- Non uniform compaction
- Larger aggregates toward outside, finer sands and light materials at inside surface
- Non-uniform crushing strength at jacking surfaces
- Tendency to find craze cracks at inner pipe surface
- Rough and stony collar back walls and seam areas
- Thin spigot making it vulnerable to damage

Compliance Factors	Vibration Technology	Spun Pipes
Water cement ratio	Low at approx .34 – .38	High at approx .45. Then spun out to approx .30 - 35
Slumping	No slumping	Slumping with minor pipe variations
Variability	High and transparent	Higher variability in the concrete
Compressive strength	Compressive strength resulting from low and constant water cement ratio	High compressive strengths but reliant on variable production factors
Wall thickness	Heavier walled pipe providing increased cover and longer design life	Thin walled pipe with lower cover resulting in shorter design life
Capacity	Production of large numbers of pipes possible per day	Only production of small numbers of pipes possible per day
Pipe tolerances	Excellent and consistent tolerance control due to automated process	Variable tolerances determined by operator skill
Liner locking system	Can use any liner locking system	Liner applications restricted to vulnerable arrow head compressive applications